

ACA Industry Labeling Guide, Sixth Edition



AmericanCoatings
ASSOCIATIONSM

ACA Industry Labeling Guide, Sixth Edition



Published by the American Coatings Association

901 New York Ave NW, Suite 300 West, Washington, DC 20001

Phone: (202) 462-6272 | Fax: (202) 462-8549 | Email: members@paint.org

© 2023 American Coatings Association, Inc. Prior editions: © 1993, 1994, 1997, 1998, 2005, 2021. All rights reserved.

TABLE OF CONTENTS

	<u>Document Page #s</u>
Preface	4
Chapter 1 – Label Format	7
Chapter 2 – Labeling of Industrial Products	15
Table 2 - GHS Hazard Classifications for Common Industrial Coatings Raw Materials	21
Chapter 3 – Label Statements for Consumer Products	22
Chapter 4 Product-specific Labeling Considerations	27
Chapter 5 – Carcinogens: Approaches to Classification And Labeling for Consumer and Industrial Products	45
Chapter 6 – State and Local Laws & Regulations	53
Chapter 7 – Labeling for Emissions from Volatile Organic Compounds	65
Chapter 8 – Pesticides	71
Chapter 9 – Commercial and Shipping Labeling	80
Chapter 10 – Adhesive, Sealant and Repair Products	91

TABLE OF CONTENTS

Preface..... 1

Labeling Guide Objective..... 1

Scope of Guidance 1

Guide Limitations 1

Consensus Systems Adopted in Guidelines 2

Responsibility of Manufacturer 2

Procedure for Use Summary Checklist..... 1

PREFACE

Labeling Guide Objective

The ACA Industry Labeling Guide, Sixth Edition is intended to provide entities at all stages of the supply chain an understanding of the covered labeling requirements relevant to paints, coatings, sealants, and adhesives. Companies placing products on the market can use this guide when developing product labels for products intended for the workplace, consumer markets, or both consumer and industrial/commercial markets. The guide also provides an overview of product-specific labeling considerations, developed through industry practice.

An understanding of the statutory and regulatory requirements discussed herein will better enable a manufacturer to meet compliance obligations under select regulatory programs at both the state and federal level. Through this guide, a manufacturer will be better equipped to provide downstream users with information to use products safely and effectively.

Scope of Guidance

The principal statutory and regulatory labeling requirements are driven by various governmental authorities, including the U.S. Environmental Protection Agency (EPA), Occupational Safety and Health Administration (OSHA); Consumer Product Safety Commission (CPSC) for household (i.e., consumer) products; and assorted state and local bodies. Legal requirements are imposed based on a range of criteria including **hazard characteristics, specific compounds, chemicals or ingredients, product lines, work practices, intended use, or intended end users**. Accordingly, the combination of various governmental requirements often entails a variety of information which a product label must convey to the end user.

This document provides general guidance for hazard and precautionary labeling under the principal statutory and regulatory programs applicable to paints: *the Occupational Safety and Health Act, Federal Hazardous Substances Act, Hazardous Materials Regulations (Department of Transportation), Federal Insecticide Fungicide and Rodenticide Act, Magnuson-Moss Warranty Act (regulating commercial practices), the Uniform State Weights and Measures Law, the Uniform State Packaging and Labeling Regulation, the Federal Trade Commission Act with the FTC Green Guides, and various state-level labeling requirements for volatile organic compounds and hazardous chemicals*.

This guidance has been developed by the American Coatings Association, Inc. (ACA) in consultation with ACA members.

NOTE: *Importantly, this guide does not offer legal advice, nor is it intended to represent a standard of care or legal compliance. The Guide and its content are not definitive of all hazard and precautionary warnings obligations legally imposed upon manufacturers.*

Guide Limitations

With respect to any specific finished product, the manufacturer or marketer has the responsibility for label content, based upon known hazards. The labeling practices identified in this guide reflect the application of the noted individual regulatory standards and guidelines. In preparing label hazard warnings, manufacturers must consider a variety of information sources and factors, including: the manufacturer's knowledge of product and raw materials; information received from raw material suppliers; the intended use of products; product liability laws; and all other applicable regulatory requirements, including state law requirements. Accordingly, it should not be assumed, understood, or implied that all necessary measures are contained in this Guide, or that additional or alternative information and/or measures are not appropriate, required, or desirable due to user conditions or circumstances, or because of applicable federal, state, or local laws. All persons using this Guide have an independent obligation to ascertain that their actions comply with applicable laws and should consult their legal counsel and/or other professionals accordingly.

Information in the guide can only be as current as the date it is prepared and published. New constituent ingredients are constantly being introduced; new formula variations continue to develop; new discoveries about chemical properties arise; products can attain new uses, and new protective techniques or equipment emerge; any or all of these can potentially result in changes in product labeling language.

Consensus Systems Adopted in Guidelines

The paint and coatings industry have also developed systems and procedures as an aid to communicating hazards. The ACA Hazardous Materials Identification System® (HMIS®) is a supplemental hazard communication system. HMIS® is discussed in another chapter and is a voluntary supplement to precautionary labeling requirements and recommendations included in the guide.

Responsibility of Manufacturer

Irrespective of any labeling laws or regulations, when a manufacturer of any product places it in channels of commerce, then — by the very nature of their business — most state laws, often tort laws, such as product liability laws, impose upon the manufacturer a duty to convey to those who might use the product, a fair and adequate warning as to the known hazard(s) of the product(s). Thereby, its customer (the end-user), by the exercise of reasonable care on his/her part, will be alerted to the possible consequences of use, or even misuse, thereof. It is very important that manufacturers of paint, coatings and other related products bear this in mind when preparing labels for their products and consult their legal counsel and/or other professionals accordingly.

CHAPTER 1 – LABEL FORMATS

Procedure for Use 2

ACA Suggested Label Format 6

Comparative Summary Table of U.S. Consumer and
Industrial Precautionary Labeling Requirements.....7

Introduction.....2

Procedure for Use Summary Checklist

- ☐ STEP 1. Identify product to be labeled.
- ☐ STEP 2. Identify **ALL** chemicals.
- ☐ STEP 3. Determine health and physical hazards
- ☐ STEP 4. Determine environmental hazards, as necessary
- ☐ STEP 5. Determine viscosity.
- ☐ STEP 6. Determine vapor pressure.
- ☐ STEP 7. Identify intended method of application.
- ☐ STEP 6. Review health effects for hazardous ingredients and by-products.
- ☐ STEP 7. Select appropriate label statements that best convey product hazard(s).
- ☐ STEP 8. Arrange label statements in order of dominance.
- ☐ STEP 9. Determine appropriate signal word(s).
- ☐ STEP 10. Review volatile organic compound label requirements
- ☐ STEP 11. See the “ACA Suggested Label Format” in Chapter 1.
- ☐ STEP 12. Review draft label and verify all applicable requirements outlined above

¹ Identification of environmental hazards is not required under the OSHA Hazard Communication Standard.

Procedure for Use

The steps described below should be followed to effectively use of the *ACA Industry Labeling Guide, Sixth Edition* and to obtain an understanding of the principles of this labeling system. In considering these procedures, the user must be aware that the guide seeks to provide label elements and considerations for both industrial and/or consumer products. Considering that some consumer products are brought into the workplace, the steps outlined below often incorporate more stringent labeling requirements than may result from any separate rule. **Before finalizing any label, review “Product Specific Labeling Considerations” in Chapter 4.**

STEP 1. IDENTIFY THE TYPE OF PRODUCT TO BE LABELED

(i.e., paint, aerosol, adhesive, etc.). Be aware of the specific and unique characteristics of the product.

Note: For arts and crafts materials subject to the Labeling of Hazardous Art Materials Act (LHAMA), specific labeling requirements apply. See in Chapter 4, “Product Specific Labeling Considerations”, for additional information. Also, view the complete regulation, 16 CFR Part 1500.14 (b) (8), in Chapter 4

STEP 2. IDENTIFY ALL CHEMICALS

It is important to identify all chemicals in a product mixture in order to ensure compliance with all applicable federal, state and local labeling regulations.

- A. Assemble information (formula, specifications, etc.) on the product to be labeled.
- B. Identify which chemicals are hazardous by referring to information from suppliers such as labels and Safety Data Sheets (SDS).
- C. Verify that no chemical in the product is banned for use in its intended market.

The Occupational Safety and Health Administration’s (OSHA) Hazard Communication Standard (HCS) requires that, unless a product (mixture) has been tested as a whole to determine its health hazards, that product (mixture) must be labeled with the health hazards of each hazardous component comprising 1.0 percent or greater (by weight or volume). Furthermore carcinogen warnings and warnings for reproductive toxicants must be provided on product labels when present at or above 0.1 percent in the mixture. OSHA further acknowledges that specific warning labels must be included whenever “a health or physical hazard has been established at some lower content”.

The Federal Hazardous Substances Act (FHSA) generally bases labeling requirements on the product’s hazard as a whole, rather than on the hazards of each component. Guidelines under the FHSA have established chronic hazard labeling criteria.

STEP 3. DETERMINE PHYSICAL AND HEALTH HAZARDS

OSHA’s Hazard Communication Standard establishes physical and health hazard criteria, specified at 29 C.F.R. 1910.1200 Appendix A and B.

STEP 4. DETERMINE ENVIRONMENTAL HAZARDS, AS NEEDED

OSHA does not require identification of environmental hazards. The United Nation’s GHS (Globally Harmonized System of Classification and Labelling of Chemicals), 8th Revision, includes two environmental hazard categories: 1) hazardous to the aquatic environment; and 2) hazardous to the ozone layer.

STEP 3. DETERMINE FLASH POINT

Note: The required test methods for determining the flash points of flammable or combustible consumer products are by “open cup”(see 16 CFR 1500.43(a)). The method adopted therein closely parallels the test method designated ASTM D 3828-81, “Standard Test Methods for Flash Point by Setaflash Closed Tester,” The accepted flash point test methods for industrial products are incorporated by reference at 29 CFR 1910.6, or any other method specified in GHS Revision 3, Chapter 2.6., See 29 CFR 1910.1200, Appendix B Physical Criteria, Section B.6 – Flammable Liquids.

FEDERAL HAZARDOUS SUBSTANCES ACT (FHSA) FLAMMABILITY CATEGORIES:

Any product that is packaged or marketed in such a way that it could be used in or around a dwelling is subject to the provisions of the FHSA (15 USC 1261 et. seq., implemented in 16 CFR 1500) and the Consumer Product Safety Act (CPSA) (15 USC 2051 et seq.). Under the FHSA, flammability categories are as follows:

- A. EXTREMELY FLAMMABLE if the flash point is at or below 20°F
- B. FLAMMABLE if the flash point is above 20°F and below 100°F
- C. COMBUSTIBLE if the flash point is at or above 100°F to and including 150°F

OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION'S (OSHA) FLAMMABILITY CATEGORIES:

Any product intended for non-household, industrial use and for professional application only and not marketed in a manner to allow use in or around a household must comply with OSHA's HCS (29 CFR 1900.1200) for labeling. OSHA's flammability definitions are explained in 29 CFR 1910.106(a) (19) (flammable liquids)

DEPARTMENT OF TRANSPORTATION (DOT) CLASS 3 HAZARD CLASSIFICATION:

The Department of Transportation (DOT) regulates only hazardous materials for domestic transportation that present acute, immediate hazards in transport such as fire, explosion, corrosion, or toxicity. The hazard class of a material will dictate the packaging, labeling, handling, placarding, and the shipping paper description requirements. The DOT's Class 3 definitions are explained in 49 CFR 173.120 (a)(1-5) and (b)(1-3) or in the ACA's Guide to Training Hazardous Materials Employees Involved in Transportation. These definitions are:

- A. FLAMMABLE LIQUID is any liquid with a flash point of not more than 60.5°C (141°F) or any material in a liquid phase with a flash point at or above 37.8°C (100°F) that is intentionally heated and transported above its flash point in bulk packaging. The following liquids are not included within the definition of a flammable liquid:
 - i. a liquid with such a high vapor pressure that it meets the definition of a gas in part 173.115;
 - ii. a liquid mixture having one or more components with a flash point of 60.5°C (141°F) or higher that make up at least 99 percent of the total volume of the mixture and it is not heated and offered at a temperature at or above its flash point;
 - iii. a liquid with a flash point higher than 35°C (95°F) which does not sustain combustion according to ASTM 4206 or 49 CFR Appendix H;
 - iv. a liquid with a flash point higher than 35°C (95°F) and a fire point greater than 100°C (212°F) according to ISO 2592; and
 - v. a liquid with a flash point higher than 35°C (95°F) which is a water-miscible solution with more than 90 percent water by mass.
- B. COMBUSTIBLE LIQUID is any liquid that does not meet the definition of any other hazard class and has a flash point above 60.5°C (141°F) and below 93°C (200°F). The following exceptions exist:
 - i. i. A flammable liquid with a flash point at or above 37.8°C (100°F) that does not meet the definition of any other hazard class can be reclassified as a combustible liquid. A liquid heated to a temperature at or above its flash point cannot be reclassified as a combustible liquid; and
 - ii. ii. A combustible liquid is not regulated for ground transportation in the USA in non-bulk packaging (less than or equal to 450 liters or 119 gallons) as long as it is not a hazardous substance, a hazardous waste, or marine pollutant.

*** SPECIAL NOTE: Refer to the "Glossary of Terms" for the DOT definitions of labeling and marking.

STEP 4. DETERMINE VISCOSITY

The FHSA requires specific label statements for products:

- A. Which contain petroleum distillates (mineral spirits, VM&P naphtha, etc.) and toluene and/or xylene, and
- B. If the product or any fraction of the product which is likely to separate on standing has a viscosity less than 100 seconds in the Saybolt Universal Viscometer (100 SUS @ 100°F). If the viscosity is greater than this, it is exempt from these labeling requirements.

Labeling — required under FHSA Part 1500.83(a)(13) — is needed because petroleum distillates may cause chemical pneumonitis if aspirated into the lungs. Products of higher viscosity are less likely to present this aspiration hazard. (A discussion and accompanying chart of specific FHSA regulations concerning viscosity measurement can be found in Chapter 4, “Product Specific Labeling Considerations”.)

STEP 5. DETERMINE VAPOR PRESSURE

For some products vapor pressure is a good indicator for determining how much of a given chemical or chemical mixture will be released into the air during application and cure/drying. Vapor pressure can usually be found on individual chemical safety data sheets.

STEP 6. IDENTIFY INTENDED METHOD OF APPLICATION

It is often useful to consider how a particular product may be used or applied to guide selection of label statements. For example, a requirement for spray application of a product would warrant consideration of the potential inhalation hazards associated with the non-volatile components (e.g. crystalline silica) in the generated aerosol. For products that are directly applied to a surface, companies may consider warnings for possible skin effects.

STEP 7. REVIEW HEALTH EFFECTS FOR HAZARDOUS INGREDIENTS AND BY-PRODUCTS

Check to see if all of the hazardous chemicals have been identified. Review the health effects cited in the suppliers' SDSs and labels to determine if new information is present, which may necessitate a revised hazard assessment.

STEP 8. SELECT APPROPRIATE LABEL STATEMENTS THAT BEST CONVEY PRODUCT HAZARD(S)

Select label statements that best convey hazards of the product.

- A. Consult materials in this guide to determine suggested label statements for each hazard once the principal and other hazards of the chemicals are known.
- B. List applicable signal words, statements of principal hazard, and other label statements for each hazardous chemical.
- C. Eliminate any inconsistencies.

STEP 10. ARRANGE LABEL STATEMENTS IN ORDER OF DOMINANCE

Select dominant statements representing the greater hazard; eliminate statements for similar, but lesser hazard. For example, “CAUSES SKIN BURNS” is a statement representing a similar but greater hazard than “CAUSES SKIN IRRITATION.” The statement “CAUSES SKIN BURNS” should be used and the statement “CAUSES SKIN IRRITATION” eliminated.

STEP 11. DETERMINE APPROPRIATE SIGNAL WORD

List applicable signal words (DANGER!, WARNING!, or CAUTION!) for flammability class and for each of the hazardous ingredients. Select and use the signal word most appropriate for the principal health and physical hazard(s) of the product(s).

STEP 12. REVIEW VOLATILE ORGANIC COMPOUND (VOC) LABEL REQUIREMENTS —

Specific labeling requirements regarding the volatile organic compound (VOC) content of various products exist at the federal and state/local levels. These labeling requirements differ according to the product type (i.e., architectural coatings, aerosol coatings, adhesives, etc.) and the location in which the product will be sold/distributed.

STEP 13. SEE THE “ACA SUGGESTED LABEL FORMAT”

- A. Once the label statements are identified, use the label format shown below to prepare the precautionary label. In general, statements of principal hazard (and acute hazards) will appear in all capital letters on the front/principal display panel of the label. Specific type sizes and conspicuous placement information will be found in Chapter 4, “Product Specific Labeling Considerations.”
- B. The following statements are required to address general hazard labeling requirements:
 - 1. “KEEP OUT OF REACH OF CHILDREN.”
 - 2. “CONTAINS: . . .” (Name the hazardous substances which contribute substantially to the product’s hazard.)
 - 3. “See Other Cautions on (Back/Side) Panel” (Required on the principal display panel when cautionary material appears on a display panel other than the principal display panel.)
- C. The suggested label formats incorporate the recommended label statements for:
 - 1. Four classes of flammability hazard (EXTREMELY FLAMMABLE, FLAMMABLE, COMBUSTIBLE, and flash point at or above 200°F)
 - 2. Two classes of viscosity (less than 100 SUS @ 100°F, and greater than 100 SUS @ 100°F)
 - 3. Potential health effects associated with overexposure to solvents (irritation, brain and central nervous system effects and possible chronic neurotoxicity) and to crystalline silica
 - 4. Self-pressurized containers, methylene chloride, polyisocyanates and powder coatings
 - 5. Specific types of caulk, sealant, adhesive and repair products

Important Note: Statements for additional hazards not included in the sample labels must be incorporated into the appropriate sample label following procedures described above to provide a complete precautionary label.

STEP 14. REVIEW DRAFT LABEL AND VERIFY THAT ALL APPLICABLE REQUIREMENTS OUTLINED ABOVE HAVE BEEN ADDRESSED

ACA Suggested Label Format

The label format shown here illustrates suggested placement of the components of precautionary labeling. **This is not a mandatory format.** The sequence of statements will depend upon the product's specific hazards and may vary from the order shown below. FHSA regulations (refer to 16 CFR 1500.121 and 1500.3) provide information regarding required prominence, placement, and conspicuousness of labeling elements for items labeled as a consumer product. The sample label format shown here is designed to be consistent with ANSI Z129.1-2000 and is intended to be an example only. For the complete label on a specific product, additional statements may be required as a result of federal, state and municipal laws, regulations and ordinances. In some cases, international labeling requirements may also apply (see Chapter 6). The OSHA HCS does not require that hazardous ingredients be identified on the precautionary label, but the manufacturer may elect to do so. However, the Consumer Product Safety Commission (CPSC) does require manufacturers to name specific ingredients that contribute substantially to the product hazard if the product is designated for the consumer market.

For a two-panel label, split here and add: "Read carefully other cautions on the back/side panel."

[16 CFR 1500.121(a)(3)]

PRODUCT IDENTITY

SIGNAL WORD!

STATEMENT OF PRINCIPAL HAZARD(S)

Contains: (Name specific ingredients that contribute substantially to the product hazard)

Other Hazard Statements:

Includes secondary statements of immediate hazards and statements of delayed hazards.

Precautionary Statements:

Includes precautionary measures pertaining to fire prevention, ventilation, inhalation, skin/eye contact.

First Aid Statements:

Includes first aid instruction statements.

Special Instructions:

Includes storage, spillage, handling and other miscellaneous statements. Manufacturers may wish to include additional statements, either here or elsewhere on the label, based upon their hazard assessment of the individual product.

KEEP OUT OF REACH OF CHILDREN

Company name and address

State-level Precautionary Statements (California's Prop. 65 and others)

Net Quantity (as required depending on product type)

Comparative Summary Table of U.S. Consumer and Industrial Precautionary Labeling Requirements

The table below demonstrates the “ACA Suggested Label Format,” including components (consumer and industrial) of precautionary labeling as required by the noted federal agencies.

Requirements	Organization (Standard)					
Product ID	ACA	CPSC (16 CFR 1500) Consumer	OSHA (29 CFR 1910) Workplace	EPA (40 CFR, 82 E) ODS	EPA - FIFRA (40 CFR, 50-189) Pesticides/ Antimicrobials	FTC - FPLA (16 CFR 500) Consumer Commodities ²
Hazardous Ingredients	√	√	√		√	√
Signal Word	√	√	√ ³		√	
Statement(s) of hazard(s)	√	√	√	√	√	
Precautionary Measures or statement	√	√	√			
First Aid	√	√ ⁴			√	
Special Instructions	√	√ ⁵			√ ⁶	
Keep Out of Reach of Children	√	√			√	
Mfr. Name/ Address	√	√	√		√	√
Label Format (type style, etc.)	√	√		√	√	
Pictograms			√			
Net Quantity (weight, measure, or numerical count)						√

¹ The Federal Trade Commission (FTC) ruled (on August 5, 1969) that “paints and kindred products” were outside the scope of the definition of “consumer commodity” contained in the FPLA, and therefore these products are not subject to requirements of the FPLA (Fair Packaging and Labeling Act).

² When required by OSHA in a substance-specific health standard

³ Where the results of contact or exposure warrant immediate treatment

⁴ When special care in handling or storage is required

⁵ According to labeling and packaging requirements in 40 CFR 156.10

CHAPTER 2 – LABEL STATEMENTS FOR INDUSTRIAL PRODUCTS

Definitions 2

Conveying Hazards To Workers 2

OSHA’s Hazard Communication
Standard - Scope and Overview.....2

Labeling Requirements 4

Mixtures 4

Consumer Products Brought Into The Workplace 4

Classification And Labeling Of Chemicals
Common To Paints And Coatings.....5

Table 1 – GHS Pictograms 6

Table 2 – GHS Hazard Classifications For Common
Industrial Coatings Raw Materials 7

Introduction

Chapter 2 outlines the label requirements of OSHA's HCS (Hazard Communication Standard), which adopted the GHS (U.N.'s Globally Harmonized System for Classification and Labelling of Chemicals) for the United States. OSHA's Revised HCS (2012) is currently based on GHS, 3rd Revision published in 2009 by the UNECE. With adoption of GHS, workplace labels for hazardous chemicals are now required to have: pictograms, harmonized signal words, harmonized hazard statements, and harmonized precautionary statements. Under the GHS these new label requirements are based on a specific hazard classification. The criteria for classifications are outlined in Appendix A and B of the final rule.

Definitions

The following important definitions are used in this chapter:

Hazard Category - the division of criteria within each hazard class, e.g., oral acute toxicity and flammable liquids include four hazard categories. These categories compare hazard severity within a hazard class and should not be taken as a comparison of hazard categories more generally.

Hazard Class - the nature of the physical or health hazards, e.g., flammable solid, carcinogen, oral acute toxicity.

Hazard Code - A unique number assigned to a hazard statement.

Hazard Statement - a statement assigned to a hazard class and category that describes the nature of the hazard(s) of a chemical, including, where appropriate, the degree of hazard.

Precautionary Code - a unique number assigned to a precautionary statement.

Pictogram - a composition that may include a symbol plus other graphic elements, such as a border, background pattern, or color, that is intended to convey specific information about the hazards of a chemical. Eight pictograms are designated under this standard for application to a hazard category.

Precautionary Statement - a phrase that describes recommended measures that should be taken to minimize or prevent adverse effects resulting from exposure to a hazardous chemical, or improper storage or handling.

Signal Word - a word used to indicate the relative level of severity of hazard and alert the reader to a potential hazard on the label. The signal words used in this section are "danger" and "warning." "Danger" is used for the more severe hazards, while "warning" is used for the less severe.

Conveying Hazards To Workers

The Hazard Statement Codes, Precautionary Statement Codes, and Pictogram Codes were developed as part of the GHS and are nothing more than identifiers. NOTE: OSHA did not use the code system when adopting the final rule; however, this Guide uses the codes to make a simpler and more prescriptive approach.

Once a chemical is classified under the GHS, the required pictograms, signal word, hazard and precautionary statements follow a prescribed "recipe."

OSHA's Hazard Communication Standard - Scope And Overview

GHS applies to coatings products manufactured for use in the workplace. The "single label" concept of labeling no longer applies as a result of OSHA seeking conformance with the GHS, and specifically exempting consumer products. The labeling practices identified in this guide reflect the application of OSHA's HCS (29 CFR 1910.1200), which was revised in 2012 to implement the GHS. Manufacturers who prepare labels in accordance with the guide must always consider information received from raw material suppliers and other relevant regulatory requirements.

OSHA applies its Hazard Communication Standard (HCS) to ensure workers are informed of hazards associated with the products used in the workplace setting [29 CFR 1200 et. seq.]. OSHA has clearly exempted consumer products – including paint and coatings products sold or available for sale to consumers – from the labeling provisions of the HCS. Accordingly, the **specific hazard and precautionary labeling under the HCS are limited to “industrial paint and coating products.”**

The following is also required:

- » Employers must prepare a written hazard communication program and inform workers and contractors at each plant site about the hazards of the chemicals present at that site.
- » Chemical manufacturers, importers and employers must provide a specific hazard classification for each chemical produced or used in the workplace.
- » The chemical manufacturer or distributor must attach required hazard and precautionary labels to each hazardous product leaving the workplace (i.e., shipped product containers).
- » The manufacturer of chemical mixtures (including paint and coatings products) may rely on the information provided by the chemical manufacturer, importer or distributor to assign the hazard classifications for the mixture, or may rely on test data developed for the mixture itself (i.e., flash point, or specific toxicology testing).
- » All employers must ensure that each container of hazardous materials in the workplace continues to bear the manufacturers hazard and precautionary labels (or compliant in-plant labeling systems, such as ACA's Hazardous Materials Information System or HMIS® may be used).
- » Chemical manufacturers and importers must provide a Safety Data Sheet (SDS) for each hazardous product produced or imported. Employers must have an SDS in the workplace for each hazardous chemical they use.
- » Employers must provide information and training for employees to the extent necessary to protect them from chemical hazards in the workplace.

Again, each chemical manufacturer should determine the hazard(s) of their product(s). The OSHA HCS lists numerous sources of information, and permits manufacturers using chemicals to rely on the hazard determination information (i.e., SDS) developed by their suppliers.

The OSHA Hazard Communication Standard consists of the regulatory text at 29 CFR 1910.1200 with the following Appendices:

Appendix A – Health Hazard Criteria

Appendix B – Physical Hazard Criteria

Appendix C – Allocation of Label Elements

Appendix D – Safety Data Sheets

Appendix E – Definition of Trade Secret

Appendix F – Guidance for Hazard Classifications, Re: Carcinogenicity

OSHA also regularly updates its OSHA Haz Com website with guidance.

Labeling Requirements

OSHA's HCS requirements include labeling of hazardous chemicals. The label, example shown below, must be applied to the container that holds the hazardous chemical so that workers will recognize the contents as hazardous. Further, these workplace labels must be legible and must not be defaced, removed, or covered. When determining what information to apply to a workplace chemical label, consider the following minimum information that must be present:

- Name, Address, and Telephone Number of Manufacturer, Importer, or Responsible Party
- Product Identifier
 - » This can be, but is not limited to, a chemical name, code number, or batch number. The product identifier on the label must match the identifier on the SDS in Section 1
- Signal Word
 - » These are used to indicate the severity of the hazard. There are only two options “Danger” and “Warning.” “Danger” is used to signify the more severe hazard (e.g. lower flash point, more easily ignitable flammable liquid) and “Warning” is used to signify a less severe hazard. The label may have either word depending on the chemical, but it should never have both.
- Hazard Statement(s)
 - » Describe the nature of the hazard. The hazard statements are specific to the hazard classification and should always be the same for that particular hazard. Standard hazard statements are found in Annex 3 of the UN GHS Purple Book.
- Precautionary Statement(s)
 - » These are recommended measures that should be taken to minimize adverse effects of exposure to the hazardous chemical. The precautionary statement that must be displayed will depend on the classification of the chemical. Precautionary statements are also found in Annex 3 of the GHS Purple Book.
- Pictogram(s)
 - » Pictograms are the graphic symbol used on the label to make the particular hazard more recognizable to workers.

OSHA Brief 3636 provides a sample label, a pictogram of GHS symbols and associated hazards and overview of labeling requirements. Table 1 below also provides GHS symbols with associated hazards.

Mixtures

It is important to remember that precautionary labels for product mixtures should include all of the information identified for each of the individual raw materials (and their components) used in the product (unless the product itself has been tested as a whole to evaluate any/all relevant health and safety hazards).

Where an ingredient with unknown acute toxicity is used in a mixture at a concentration $\geq 1\%$, and the mixture is not classified based on testing of the mixture as a whole, a statement that X% of the mixture consists of ingredient(s) of unknown acute toxicity is required on the label.

Consumer Products Brought Into The Workplace

OSHA exempts “Any consumer product or hazardous substance as those terms are defined in the Consumer Product Safety Act (15 U.S.C. 2051 et seq.) and Federal Hazardous Substances Act (15 U.S.C. 1261 et seq.)” from labeling requirements of the OSHA HazCom Standard (29 CFR 1910.1200), when consumer products are classified and labeled according to requirements for consumer products. See [29 CFR 1910.1200\(b\)\(5\)\(v\)](#). Occupational exposure to consumer products is exempted from the HCS when the employee's use results in exposures to the chemical that are no more frequent or of a longer duration than would be expected from normal consumer use (see narrative discussion on this issue in Appendix of A, CPL 2-2.38C, page 5). See also [OSHA Letter of Interpretation of Nov. 27, 1990](#).

OSHA further recommends, “. . . where an employer is uncertain whether the duration and frequency of exposure to these products is comparable to that of a consumer, he or she should ‘obtain or develop the MSDS and make it available to employees’ (see 52 FR, pg. 31862, August 24, 1987).” For further interpretation, see OSHA’s memo dated Aug. 15, 1990, titled *Hazard Communication and Consumer Products*.

Classification and Labeling Of Chemicals Common to Paints and Coatings

The documents associated with this chapter were developed by ACA’s Product Stewardship Committee and ACA staff. The European Chemicals Agency’s (ECHA) Classification and Labeling Database was used to populate Table 2 (below), common chemicals in paints and coatings and related hazard information. Table 2 below identifies the GHS classifications, GHS hazard statement codes, and GHS pictogram codes for many hazardous ingredients commonly used in the formulation of products for the paint, coatings, caulks, sealants and adhesives industries. Once you find a specific chemical on Table 2, take each GHS classification and refer to Appendix C of the OSHA Haz Com Standard to determine the appropriate Hazard Statements. If data from your raw material supplier differs from the classifications in Table 2, use your supplier’s data to classify your product.

Many chemicals in Table 2 do not have a harmonized classification in the ECHA database; in this case, it is important to refer to supplier data when classifying the hazards of your end product.

For reference, the ECHA database is available at: <http://echa.europa.eu/information-on-chemicals/cl-inventory-database>.

IMPORTANT: Labeling for environmental hazards is not required under the Revised HCS, but this Guide has included the environmental hazard classifications in Table 2 to serve as a reference for other national jurisdictions where they may be required.

REQUIREMENTS FOR SIGNAL WORDS, HAZARD STATEMENTS, PICTOGRAMS, AND PRECAUTIONARY STATEMENTS

For a complete table of signal words, hazard statements and pictograms by hazard class and category, see [Appendix C of OSHA's Haz Com Standard](#).

Table 1 – GHS Pictograms

Table 1 lists the GHS Pictograms and the Hazard Classifications that they represent.

• Explosive • Self Reactives • Organic Peroxides  Exploding Bomb - GHS 01	• Flammables • Self Reactives • Pyrophotics • Self-Heating • Emits Flammable Gas • Organic Peroxides  Flame - GHS 02	• Oxidizers  Flame over Circle - GHS 03	• Gases Under Pressure  Gas Cylinder - GHS 04
• Corrosives  Corrosion- GHS 05	• Acute Toxicity (severe)  Skull and Crossbones - GHS 06	• Irritant • Dermal Sensitizer • Acute Toxicity(harmful) • Narcotic Effects • Respiratory Tract • Irritation  Exclamation Mark - GHS 07	• Carcinogen • Respiratory Sensitizer • Reproductive Toxicity • Target Organ Toxicity • Aspiration Toxicity  Health Hazard - GHS 08
• Aquatic Toxicity  Environmental - GHS 09			

Table 1 - GHS Pictograms

When applying Pictograms to labels, it is important to note the following hierarchy:

1. When selecting Pictograms if the Skull and Crossbones Pictogram is required, the exclamation mark Pictogram should not appear for Acute Toxicity.
2. When the corrosive Pictogram is required, the exclamation mark Pictogram should not appear for skin or eye irritation.
3. When the health hazard Pictogram is required for respiratory sensitization, the exclamation mark Pictogram should not appear for skin sensitization or for skin or eye irritation.

Table 2 – GHS Hazard Classifications for Common Industrial Coatings Raw Materials

Table 2 of this Labeling Guide provides a list of common chemicals used in formulating industrial coatings. This table is derived from [Annex VI of the EU Classification, Labelling and Packaging Regulation](#), which provides harmonized classifications.

NOTE: Hazard classifications on suppliers' SDS may vary from those included in Table 2. If classification on suppliers' SDS varies, use classifications provided by your supplier to classify your product.

An *excerpt* of Table 2 is included below. The complete table is available [here](#).

Chemical Name	CAS Number	Hazard Class and Category Code(s)	Hazard Code(s)	Signal Word	Pictogram Codes	Additional Information (If a chemical has no consensus by ECHA, refer to supplier data, or check the ECHA database to see if a consensus has been reached.)
Formaldehyde	50-0-0	Acute Tox. 3* Acute Tox. 3* Skin Corr. 1B Skin Sens. 1 Acute Tox. 3* Carc. 2	H301 H311 H314 H317 H331 H351	DANGER	GHS06 GHS05 GHS07	
Glycerol (1,2,3 propanetriol)	56-81-5	Skin Irrit. 2 Eye Irrit. 2 STOT RE 2 STOT RE 1	H315 H319 H373 H372	WARNING	GHS07 GHS08	No Consensus by ECHA
Propylene Glycol	57-55-6	Eye Irrit. 2 Acute Tox. 4 Aquatic Chronic 1 Skin Irrit. 2 STOT SE 3 Skin Sens. 1	H319 H302 H410 H315 H335 H317	WARNING	GHS07 GHS0C9	No Consensus by ECHA
Tetra Sodium EDTA	64-02-8	Acute Tox. 4* Eye Dam. 1	H302 H318	DANGER	GHS07 GHS05	
Ethanol	64-17-5	Flam. Liq. 2	H225	DANGER	GHS02	
Formic Acid	64-18-6	Skin Corr. 1A	H314	DANGER	GHS05	
Acetic Acid	64-19-7	Flam. Liq. 3 Skin Corr. 1A	H226 H314	DANGER	GHS02 GHS05	
Methanol	67-56-1	Flam. Liq. 2 Acute Tox. 3* Acute Tox. 3* Acute Tox. 3* STOT SE 1	H225 H301 H311 H331 H370 **	DANGER	GHS02 GHS06 GHS08	
Isopropanol	67-63-0	Flam. Liq. 2 Eye Irrit. 2 STOT SE 3	H225 H319 H336	DANGER	GHS07 GHS02	

CHAPTER 3 – LABEL STATEMENTS FOR CONSUMER PRODUCTS

- Introduction 2
- Hazardous Consumer Products under the FHSA 2
- Hazardous Properties of Mixtures and
Listing of Components.....2
- FHSA Label Elements 3
- Label Type Size, Location 3
- Consumer Products Brought into the Workplace.....5
- Products for Industrial Use Only 5

Introduction

This chapter is designed to provide an overview of statutory labeling requirements for products under the *Federal Hazardous Substances Act* (FHSA) as administered by the Consumer Product Safety Commission (CPSC) and the CPSC implementing regulations, designed for consumer use and placed into consumer-only markets.

Note, this guide only discusses specific regulatory labeling requirements, it does not address a manufacturer's potential obligations under state tort laws, such as product liability laws. Manufacturers are advised to consult their legal counsel and/or other professionals to address any such obligations.

Hazardous Consumer Products under the FHSA

Companies developing labels for consumer products must carefully review and comply with requirements of the CPSC (Consumer Product Safety Commission) pursuant to the FHSA (*Federal Hazardous Substances Act*), described below, while assessing the inherent hazards of the product during foreseeable use, storage or purchase.

The FHSA (*Federal Hazardous Substances Act*) requires labeling for products that are:

1. Toxic, corrosive, flammable or combustible, an irritant, or a strong sensitizer, or which generate pressure through decomposition, heat, or other means, as defined in the act and regulations;
2. Have the potential to cause substantial personal injury or substantial illness during or as a result of any customary or reasonably foreseeable handling or use, including reasonably foreseeable ingestion by children; and
3. Which may be brought into or around a place where people live, including garages and storage areas that are part of a household.

Companies, placing consumer products on the market with defined hazard characteristics, must identify hazards using tests specified by regulation of the CPSC at 16 CFR 1500, as cited below:

- Toxic – 16 CFR 1500.3(c)(1) and (c)(2) with 16 CFR 1500.135 for carcinogens and other chronic hazards
- Corrosive – 16 CFR 1500.41
- Flammable or combustible – 16 CFR 1500.3(c)(6), where:
 - a. Extremely flammable if, when tested, it has a flash point at or below 20° Fahrenheit (F.),
 - b. Flammable if it has a flash point above 20° F. and below 100°F., or
 - c. Combustible if it has a flash point at or above 100° F. up to and including 150° F.
- Irritant – 16 CFR 1500.41 (Test for Skin Irritants) and 1500.42 (Test for Eye Irritants)
- Strong sensitizer – 16 CFR 1500.13

Hazardous Properties of Mixtures and Listing of Components

CPSC requires testing of mixtures in their entirety (See 16 CFR 1500.5). CPSC explains, “A mixture of substances may therefore be less hazardous or more hazardous than its components because of synergistic or antagonistic reactions” (16 CFR 1500.5).

On a label, companies must list “the common or usual name or the chemical name (if there be no common or usual name) of the hazardous substance or of each component which contributes substantially to its hazard, unless the Commission by regulation permits or requires the use of a recognized generic name.” (15 U.S.C. 1261(2)(p)(1))

The purpose of the requirement for the common or usual name or the chemical name is to provide information necessary to enable a physician, emergency room, or poison control center to properly treat a victim of an accidental exposure to a hazardous household substance per the CPSC. It is not necessary, or even desirable, to identify all of the substances in the mixture, but only those that “contribute substantially to the hazard.” Generally, this includes those substances that are present in a quantity sufficient to require a statement of principal hazard or to affect the first aid instructions.

The rule provides for exemptions from listing hazardous components for small packages, minor hazards, and special circumstances. For exemptions, see [16 CFR 1500.83](#). CPSC also exempts chemicals where the sole hazard is from a substance that generates pressure contained in a pressurized container. Similarly, companies do not need to identify components or substances that are flammable or extremely flammable ([16 CFR 1500.83\(a\)\(1\)](#)), provided other applicable label elements are specified.

Companies may find it helpful to include warnings in accompanying product literature and elsewhere, directing the user to review the hazard information on the product label before using. Each company must make its own assessment of whether and how to adopt such a practice, depending upon specifics.

Some companies include warnings in accompanying product literature and elsewhere, directing the user to review the hazard information on the product label before using.

For additional descriptions of hazards and guidance, see [CPSC's online guidance about FHSA Requirements](#).

FHSA Label Elements

If the product poses a hazard, FHSA requires the following label elements (See [15 U.S.C. 1261\(p\)\(1\)](#) and [16 CFR 1500.121](#)):

- Identification of manufacturer (or packer, distributor or seller)
- Chemical name of each hazardous ingredient
- Signal word "Danger," if corrosive, extremely flammable or highly toxic
- Signal word "Caution" or "Warning" for all others
- Statement of principle hazard
- Precautionary statements for protection when using
- First aid instructions, where appropriate
- Signal word "Poison" for highly toxic products
- Special care, handling or use instructions (including PPE)
- Statement, "Keep Out of Reach of Children"

As noted above, CPSC exempts certain products from the requirement to specify a hazardous component (See [16 CFR 1500.83](#)). CPSC also exempts or modifies warning requirements, precautionary statements and other label elements for specific products, as specified at [16 CFR 1500.83](#). This section includes product-specific exemptions for:

- Inks in specified packaging limits and certain formulations;
- Containers of liquid and semi-solid substances such as viscous-type paints, varnishes, lacquers, roof coatings, rubber vulcanizing preparations, floor covering adhesives, glazing compounds, and other viscous products containing toluene (also known as toluol), xylene (also known as xylol), or petroleum distillates in concentrations (in specified concentrations); and
- Viscous nitrocellulose-base adhesives containing more than 4 percent methyl alcohol

Label Type Size, Location

The statement "See Other Caution on (Back/Side) Panel" is noted on many sample labels in this guide. The panel should be identified with the proper wording. Some firms may wish to draw attention to the location of the "Other Cautions," referred to on the front panel. A borderline may also be used for this purpose.

All cautionary information must be located prominently and in conspicuous and legible type in contrast by typography, layout, or color, with printed matter on the label.(See [16 CFR 1500.121](#).)

Type Size: Type Size is specified in terms of the actual height of the printed image in fractions of an inch, rather than in the traditional point size of the type. It is related directly to the actual area of the principal display panel, according to the table below.

Note: The table’s calculations are based on “standard” sizes taken from the Can Dimension Dictionary. However, it would be prudent for each paint filler to measure his own containers. To determine the principal display panel area of round cans, multiply the diameter of the can (in inches) by 3.14 to determine the circumference. Multiply this by the height (not including the seams), then multiply the product by 0.40 (40 percent). For “F” style cans (a rectangular can with screw cap), simply multiply the width of the panel by the height (not including the seams).

Type Size Requirements			
Container Size	Signal Word	Hazard Statements	Precautionary Statements
Round Friction Lid Cans			
1 gallon	5/32"	7/64"	3/32"
1 quart	1/8"	3/32"	5/64"
1 pint	7/64"	3/32"	1/16"
½ pint	3/32"	1/16"	1/16"
“F” -style Cans			
1 gallon	5/32"	7/64"	3/32"
1 quart	5/32"	7/64"	3/32"
1 pint	1/8"	3/32"	5/64"
½ pint	7/64"	3/32"	5/64"
Aerosol Cans			
10 oz. or more	1/8"	3/32"	5/64"
6-8 oz	7/64"	3/32"	1/16"
3-4 oz.	3/32"	1/16"	1/16"

Prominence: Several factors other than type size affect the prominence of cautionary labeling, as follows:

Horizontal placement: Labeling required to be on the principal display panel must appear in lines that are generally parallel to the base. The balance of the required cautionary labeling on another panel must be parallel to all other labeling on that panel. (This requirement does not apply to labeling on collapsible tubes, cylindrical containers with a narrow diameter, or “F” style cans where both the “front” and “back” of the container are principal display panels; see part 1500.121 (b)(1).)

Type style: The ratio of the height of a capital or upper case letter to its width shall be no more than 3:1.

Color: The color of the type used must be in sharp contrast to the background. Combinations such as black letters on a dark blue or green background, dark red letters on a light red background, white letters on a light gray background, etc., are not satisfactory.

Interference: The background to any cautionary labeling should be clear and free of any portion of the design, vignettes, or other printed graphic matter.

Labeling Requirements for Accompanying Literature: While not affecting the sample labels herein, the provisions of 16 CFR 1500.125 should be noted carefully. This section requires that all of the information required by section 2(p) of the FHSA be included in accompanying literature. Section 2(n) of the act provides that this labeling must be on “all accompanying literature where there are directions for use, written or otherwise.” Normally, this does not include advertising and promotional literature such as color cards. All such cautionary labeling shall be in reasonable proximity to any directions for use and shall be placed together within the same general area. The type size of such cautionary labeling shall be reasonably related to the type size of other printed matter in the accompanying literature.

Wording in Boxes: Readers of this guide will note that the wording for sample labels in Chapter 2 is enclosed in boxes. This is done to highlight the suggested label statements. Neither the law nor the regulations require that the warning statements be enclosed in a box. The requirement extends only to keeping such statements clear and conspicuous and separate from other statement on the label. Each manufacturer should make its own decision whether or not to enclose such labels in boxes.

Consumer Products Brought into the Workplace

OSHA exempts “Any consumer product or hazardous substance as those terms are defined in the Consumer Product Safety Act (15 U.S.C. 2051 *et seq.*) and *Federal Hazardous Substances Act* (15 U.S.C. 1261 *et seq.*)” from labeling requirements of the OSHA HazCom Standard (29 CFR 1910.1200), when consumer products are classified and labeled according requirements for consumer products. See [29 CFR 1910.1200\(b\)\(5\)\(v\)](#). The exemption applies when an employee's use results in exposures to the chemical that are no more frequent or of a longer duration than would be expected from normal consumer use (see narrative discussion on this issue in Appendix of A, CPL 2-2.38C, page 5). See also [OSHA Letter of Interpretation of Nov. 27, 1990](#).

OSHA further recommends, “. . . where an employer is uncertain whether the duration and frequency of exposure to these products is comparable to that of a consumer, he or she should ‘obtain or develop the MSDS and make it available to employees’ (see 52 FR, pg. 31862, August 24, 1987).”

For further interpretation, see OSHA's memo dated Aug. 15, 1990, titled [Hazard Communication and Consumer Products](#).

Products for Industrial Use Only

Certain products may be manufactured for industrial or professional use markets and not be intended for consumer or household use. It is often the practice for coatings manufacturers to use a statement such as “For Industrial Use Only,” at the end of the precautionary text. In such cases, the word “Industrial” may be substantiated by “Professional” or “Industry” as comparable terms, except where defined and limited by federal, state and local Volatile Organic Compound (VOC) rules (see Chapter 7 for further information about VOC labeling). For example, the U.S. Environmental Protection Agency's National Architectural Industrial Maintenance (AIM) Rule allows one of four specific statements to be used (see the section, “National Volatile Organic Compound Emission Standards,” in Chapter 4).

Additionally, listing of Hazardous Chemical Constituents on industrial or professional use products labels is limited to those constituents for which OSHA has issued chemical-specific regulation.

CHAPTER 4 PRODUCT-SPECIFIC LABELING CONSIDERATIONS

Introduction.....	2
Product Specific Labeling Issues	2
1. Adequate Ventilation	2
3. Spontaneous Combustion.....	2
4. Ingestion Hazard	3
5. Vomiting	3
6. Petroleum Distillates (including toluene and xylene).....	3
7. Lead-Containing Paints.....	4
8. Surface Preparation Lead Hazard (ACA-State Attorney’s General Agreement)	5
9. Portland Cement-Containing Paints.....	6
10. Aerosol and Self-Pressurized Products.....	6
11. Deliberate Abuse	7
12. Multi-Component Kits.....	7
13. Spray Equipment.....	7
14. Solvent Neurotoxicity	7
15. Methylene Chloride	8
16. Ozone-Depleting Substances	9
17. Empty Containers.....	9
18. Five-Gallon Open-Head Plastic Containers	10
19. Labeling of Hazardous Art Materials	10
20. Personal Protective Equipment (PPE)	10
21. Cure Volatiles	11
22. Direct Food Contact Coatings	12
23. Incidental Food Contact Coatings	13
24. Small Packaging Labeling Guidance	13
Conclusion – Sample Labels and General Guidance.....	14

Introduction

This chapter provides information to be considered when labeling for specific product types and uses. The labeling issues identified below are based on regulatory requirements, historical practice and observations of product manufacturers. The labeling issues largely apply to consumer products, but might have some applications to workplace and commercial products also. Before attempting to draft or review a label, review the Preface, Chapters 1, 2 & 3 of this guide with the following items. Then, refer to the representative sample labels at the end of this chapter.

The Product-Specific Considerations included below are taken in their entirety from the *ACA Industry Labeling Guide, Fifth Edition* as Supplemented May 2005, and as included, in their entirety, in the Advance Supplement to the Labeling Guide, published in 2014, with some updates. Considerations below are based on historical practice within the industry.

ACA members are encouraged to review these considerations while ensuring industrial products also include GHS-conforming labels. Not all content in this chapter relates to industrial products. Users are cautioned to read and consider all information provided and determine applicability for product labels, based on whether the product is for industrial / professional use or for consumer use.

Product Specific Labeling Issues

1. Adequate Ventilation

Labels bearing such statements as “VAPOR HARMFUL,” warn users that these products should be applied with care, and that the users should take necessary precautions to minimize breathing vapors which may arise during application of these products.

The labeling statement, “Use only with adequate ventilation,” has evolved over time (when used in conjunction with such statements as “VAPOR HARMFUL”) and may be supplemented with various additional related precautionary statements.

2. Fire Hazards

Under certain circumstances, products with a flash point above 20° F may generate enough flammable vapors to set the stage for a flash fire or explosion, and thus, should be labeled appropriately. Some factors to consider are quantity and flash point of the solvents in the mixture, quantity of product ordinarily used at one time, size of the surface area being contacted, method of application, place of application (indoors or outdoors), and size of container (a very small container may not contain enough solvent to reach a flammable vapor level).

3. Spontaneous Combustion

Improper handling or disposal of rags, paper and other items that have been used for applying or cleaning up paint or related products may ignite through the process of spontaneous combustion. This is common with the fish oil or vegetable oils often used in stains or wood fillers, but is not necessarily limited to these raw materials or products.

ACA recommends precautionary labeling for products whose formulation or anticipated use may warrant identification of a spontaneous combustion hazard. In assessing whether a product warrants spontaneous combustion hazard labeling, companies should use their professional judgment informed by various resources such as the NFPA Fire Protection Manual.

At least one state, Connecticut, Public Act No. 94-73, Title 21A Consumer Protection §21a-337, requires precautionary labeling of certain products sold or distributed in Connecticut related to the risk of spontaneous combustion. This statute compels specific conspicuous precautionary labeling language on drying oil and drying oil products. The statute requires a conspicuous warning label on a side or back panel of such product stating:

DANGER - RAGS, STEEL WOOL OR WASTE SOAKED WITH (INSERT PRODUCT NAME) MAY SPONTANEOUSLY CATCH FIRE IF IMPROPERLY DISCARDED. IMMEDIATELY AFTER USE, PLACE RAGS, STEEL WOOL OR WASTE IN A SEALED WATER-FILLED METAL CONTAINER.

For applicable products, a conspicuous label warning including the Connecticut required wording is recommended. Adoption of the Connecticut wording for such products would allow a manufacturer to use one label regardless of where the products are distributed.

4. Ingestion Hazard

Products that, upon ingestion, can cause illness or injury to humans are classified as “toxic by ingestion” under FHSA and must bear appropriate warnings, including a statement of the principal hazard(s), the identity of the chemical(s) that create the hazard(s), and the first aid instructions.

These factors are considered in the sample labels and suggested label statements, but there are special circumstances that also must be considered for products containing petroleum distillates, methanol, and lead and those packaged in aerosol cans (see below).

5. Vomiting

On Aug. 1, 1978, CPSC reported in the *Federal Register* (43 FR 33701-05) its final Statement of Policy on First Aid Directions for Inducing Vomiting, which states:

- A. That it considers the use of a salt solution to induce vomiting (saline emesis) to be an unacceptable and frequently ineffective means of inducing vomiting;
- B. That saline emesis is no longer recommended by the CPSC (16 CFR 1500.134) as an appropriate first aid direction; and
- C. That, in cases where saline emesis has been recommended in the past, unless a particular contra-indication exists in connection with any particular hazardous substance, the CPSC considers ipecac syrup to be the appropriate emetic.
- D. CPSC requires that first aid statements do not instruct to induce vomiting unless there is a specific and documented medical reason for the recommendation that has been identified by a qualified physician or poison control specialist. Note: Companies may wish to consult suppliers' SDSs and/or with their own physicians, toxicologists, and lawyers concerning what constitutes appropriate first aid for their specific product formulations.

6. Petroleum Distillates (including toluene and xylene)

Most petroleum solvents used by the paint industry are not toxic by ingestion under the FHSA if they remain in the gastrointestinal tract, but a teaspoonful or even less may be fatal due to chemical pneumonitis if it gets into the lungs by aspiration. This can happen in a number of ways such as choking, gagging or vomiting.

Therefore, the FHSA regulations require special labeling for this hazard (see [16 CFR 1500.14\(a\)\(3\)\(ii\)](#)), unless the viscosity of the product or of any liquid that may separate or be present in the container (tested at 100° F) is 100 Saybolt Universal Seconds (SUS) (21 centistokes) or higher—when the risk of chemical pneumonitis is substantially lessened (see [16 CFR 1500.83\(a\)\(13\)](#)).

The Viscosity Comparison Chart below shows the relationship between various methods of measuring viscosity to the Saybolt Universal Scale. Although the chart is not precise to a mathematically absolute degree, it does permit determination of approximate relationship of the systems of measure contained therein.

In addition to the aspiration hazard, toluene and xylene possess a hazard from inhalation of the vapors, regardless of viscosity. If a product contains 10 percent or more (by weight) of toluene, 10 percent or more of xylene, or 10 percent or more of a mixture of the two, the words VAPOR HARMFUL must appear on the main panel in addition to any other statements of hazard, even if the product does not require an ingestion warning. One or both chemicals need to be named, with supplemental statements for adequate ventilation.

Because of the aspiration hazard, low viscosity mixtures (less than 100 SUS at 100° F) containing 10 percent or more petroleum distillates, toluene and/or xylene ordinarily require the first aid instruction: “If swallowed do not induce vomiting. Get medical attention immediately.” If the product contains more than 10 percent toluene and/or xylene, one or both of these chemicals should be named on a label. For most other petroleum solvents, the generic term “petroleum distillates” may be used. However, there may be instances where “other hazardous substances” must be named on the label.

VISCOSITY COMPARISON CHART							
Centistokes	0	10	20	30	40	50	60
SUS-Seconds	50		100	150		200	250
Zahn #1 Cup-Seconds	20		30	40	50	60	70
Ford #2 Cup-Seconds	20	25	30	35	40	50	55
Gardner Tubes	A-5	A-4	A-3	A-2	A-1	A	
Centipoises (Dens. 0.900)	10	20	30	40	50		
Centistokes	10	20	30		40	50	60
	SPECIAL LABELING REQUIRED under Part 1500.14 FHSA Regulations			EXEMPT from Special Labeling under Part 1500.83(a)(13) FHSA Regulations			

7. Lead-Containing Paints

Any paints intended for use by consumers must meet federal requirements germane to the use of lead and residual lead content (see [16 CFR Part 1303](#)). In 1972, CPSC issued its first regulations limiting the lead content in consumer paints to no more than 0.5 percent. In 1978, CPSC banned the use of lead-containing paints, defined as having lead content higher than 600 ppm. In 2009, CPSC further reduced the lead limit to 90 ppm.

CPSC states:

“Lead-containing paint means paint or other similar surface coating materials containing lead or lead compounds and in which the lead content (calculated as lead metal) is in excess of 0.009 percent by weight of the total nonvolatile content of the paint or the weight of the dried paint film.”

CPSC designates lead-containing paint as a banned hazardous product. Certain “special purpose” coatings are exempt from the ban, provided they bear certain labeling (See [16 CFR 1303.3](#)):

WARNING

Contains lead. Dried film of this paint may be harmful if eaten or chewed. (See other cautions on side/back panel.)

Do not apply on toys or other children’s articles, furniture, or interior surfaces of any dwelling or facility which may be occupied or used by children.

Do not apply on exterior surfaces of dwelling units such as windows, sills, porches, stairs, or railings, to which children may be commonly exposed.

Keep out of reach of children.

The “special purpose” coatings identified in [16 CFR Part 1303.3\(b\)](#) are:

- (1) agricultural and industrial equipment refinish coatings;
- (2) industrial (and commercial) building and equipment maintenance coatings, including traffic and safety-marking coatings;
- (3) graphic art coatings (i.e., products marketed solely for application on billboards, road signs, and similar uses and for identification marketing in industrial buildings);
- (4) touch-up coatings for agricultural equipment, lawn and garden equipment, and appliances; and
- (5) catalyzed coatings marketed solely for use on radio-controlled, model-powered aircraft.

CPSC also exempts certain products from the ban on lead-containing paint without requiring a cautionary label. These products are listed [16 CFR Part 1303.3\(c\)](#) and are listed below:

- (1) Mirrors which are part of furniture articles to the extent that they bear lead-containing backing paint.
- (2) Artists’ paints and related materials.
- (3) Metal furniture articles (but not metal children’s furniture) bearing factory-applied (lead) coatings.

8. Surface Preparation Lead Hazard (ACA-State Attorney’s General Agreement)

On May 9, 2003, the National Paint and Coatings Association (now American Coatings Association or ACA) entered into an agreement with 50 state attorneys general that established a national program of consumer paint product warnings, point of sale information, and education and training regarding the potential exposure to lead-dust during the remodeling or renovation of buildings that may contain old lead-based paint.

The agreement called for an interim product sticker program and permanent product labeling to alert consumers that lead dust exposure may occur during the renovation and remodeling of buildings, which may contain old lead-based paint. A 19-month sticker program for consumer paints began for products manufactured on or after Sept. 30, 2003 and extended through April 30, 2005. The new labeling requirements began Dec. 31, 2004.

The new labeling requirements affect only **consumer paints** defined as “paints available to the consumer, including professional contractors, at the retail level. Consumer Paints includes all architectural coatings intended for interior and exterior applications to residences, public and private buildings and similar structures, and excludes adhesives and coatings recommended by the manufacturer for shop applications; non-stationary structures (e.g., airplanes, ships, automobiles and railcars); water proofing sealers and other deck coatings; field marking; and hobby craft coatings.”

The following is the label language applied to consumer paint products, under the agreement:

For large containers (one quart and larger):

WARNING! If you scrape, sand, or remove old paint, you may release lead dust. LEAD IS TOXIC. EXPOSURE TO LEAD DUST CAN CAUSE SERIOUS ILLNESS, SUCH AS BRAIN DAMAGE, ESPECIALLY IN CHILDREN. PREGNANT WOMEN SHOULD ALSO AVOID EXPOSURE. Wear a NIOSH-approved respirator to control lead exposure. Clean up carefully with a HEPA vacuum and a wet mop. Before you start, find out how to protect yourself and your family by contacting the National Lead Information Hotline at 1-800-424-LEAD or log on to www.epa.gov/lead.

For small containers (aerosols under 24 ounces, and liquid paints under 32 ounces):

WARNING! If you scrape, sand or remove old paint, you may release lead dust. LEAD IS TOXIC. Contact the National Lead Information Hotline at 1-800-424-LEAD or log onto www.epa.gov/lead.

[NOTE: For both labels, the type size requirements are not specified but should not be any smaller than the type size required for other hazard and precautionary warnings on the container.

Placement of the warning should be in close proximity to the “directions for use” and, in particular, any surface preparation recommendations.]

In addition to the label warning requirements above, consumer paint manufacturers were also required to do “Sticker” labeling of large containers of consumer paints manufactured after Sept. 30, 2003 and through April 30, 2005. Stickers could be placed on the lid, top, plug or side of the container (using either an adhesive sticker or lithograph or heat stamped impression). The warning language required on the sticker is the same as the warning required for small containers above.

Consumer paint manufacturers also had the option of meeting both the labeling and “Sticker” requirements by using a “Sticker” with the large container (full) warning above but placement is limited to the lid, top or plug of the container. Use of the full warning “Sticker” began on Sept. 30, 2003 and continued through April 30, 2005, at which time the product label had to be amended to include the full warning or the “Sticker” label must appear indefinitely.

[**NOTE:** Containers subject to CPSC enforcement of the child-drowning hazard label (ASTM F1615-95), typically five-gallon containers, may incorporate the large container version of the warning on the side of the container opposite the child-drowning warning using the same label area and type size.]

9. Portland Cement-Containing Paints

In response to a complaint alleging that a paint-on product containing Portland cement had caused blindness, CPSC conducted biological testing of several such products. As a result of these tests, CPSC staff issued an advisory opinion which concluded that the following cautionary labeling must be included for Portland cement and products containing it:

WARNING: INJURIOUS TO EYES

{“CAUTION” may be used instead of “WARNING”; for Spanish translations use “Causes Eye Injury” rather than “Injurious to the Eye”}

CAUSES SKIN IRRITATION. (Use in products containing a high percentage of Portland Cement) Contains Portland cement. (Including “and lime” is appropriate.)

Avoid eye contact or prolonged contact with skin. Wash thoroughly after handling.

In case of eye contact, flush with plenty of water for at least 15 minutes. Consult a physician immediately.

Keep out of reach of children.

NOTE: Because a direct translation of the statement “INJURIOUS TO EYES” is difficult, companies developing Spanish or French label copy should consider using the eye damage statements offered in Annex I of the [EU CLP Regulation](#).

10. Aerosol and Self-Pressurized Products

Aerosol products that emerge from the container as a mist or fine droplets, and where ingestion by children is not reasonably foreseeable, do not ordinarily require the warning “HARMFUL OR FATAL IF SWALLOWED.”

Furthermore, in the unlikely event that the product would be sprayed into a cup and collected, the viscosity of the collected material may be high enough (100 SUS at 100°F or greater) to qualify for exemption from the special labeling required for petroleum distillates. (See “Petroleum Distillates” section above)

However, if the manufacturer feels that it is reasonably foreseeable that a child would collect and drink a sufficient quantity of the product to provide an aspiration hazard (16 CFR 1500.14(b)(3)(ii)), consult section about “Petroleum Distillates.”

In addition to the recommended cautionary labeling, ASTM Standard D-3789-79 (Labeling of Consumer Spray Paints) provides recommended label copy for directions for use. The purpose is the standardization of format and terminology among all manufacturers to promote safe use and proper application of the product. The label statements listed below are typically used when labeling aerosol/self-pressurized products:

- A. CONTENTS UNDER PRESSURE
- B. Do not puncture or incinerate (burn) container. Exposure to heat or prolonged exposure to sun may cause bursting. Do not expose to heat or store at temperatures above 120°F.

11. Deliberate Abuse

The manufacturer may wish to include the following statement warning against deliberate abuse (intentional misuse) of aerosol and other products:

WARNING! Use only as directed; intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.

12. Multi-Component Kits

For two-package epoxy systems, antiquing kits or other multi-component systems that are packaged in kit form in one container, the outside of the container must state on the main panel, within a borderline, all of the following:

- Signal word for the most hazardous component of the kit.
- This kit contains the following chemicals that may be harmful if misused: (List hazardous chemical compounds by name.)
- Read cautions on individual containers carefully. Keep out of reach of children.

This requirement is outlined in [16 CFR 1500.83\(a\)\(25\)](#):

Cleaning and spot-removing kits intended for use in cleaning carpets, furniture, and other household objects; kits intended for use in coating, painting, antiquing, and similarly processing furniture, furnishings, equipment, sidings, and various other surfaces; and kits intended for use in photographic color processing are exempt from the requirements of Section 2(p)(1) of the Act (repeated in part 1500.3 (b)(14)(i) and from the requirements of part 1500.14, provided that:

- A. The immediate container of each hazardous substance in the kit is fully labeled and in conformance with the requirements of the Act and regulations thereunder; and
- B. The carton of the kit bears on the main display label (or panels) within a borderline, and in the type size specified in part 1500.121, the caution statement “(Insert proper signal word as specified in paragraph (a)(25)(iii) of this section.) This kit contains the following chemicals that may be harmful if misused: (List hazardous chemical components by name.) Read cautions on individual containers carefully. Keep out of reach of children.”
- C. If either the word “POISON” or “DANGER” is required on the container of any component of the kit, the same word shall be required to appear as part of the caution statement of the kit carton. If both “POISON” and “DANGER” are required for the labeling of any component or components in the kit, the word “POISON” shall be used. In all other cases the word “WARNING” or “CAUTION” shall be used.

For proper type size and further information refer to [16 CFR 1500.121](#).

13. Spray Equipment

Where a product is recommended for application by spray, the manufacturer may wish to include information and cautions about the spraying and/or the use of spray and protective equipment. This might be done in the directions for use, rather than in the warning sections covered by the various ACA sample labels. An example of such wording might be:

When spraying, follow spray equipment manufacturer’s recommendations carefully. Wear appropriate respirator, eye protection, and protective clothing.

14. Solvent Neurotoxicity

For several decades, the *ACA Industry Labeling Guide* has recommended a statement on the potential for brain and nervous system damage from occupational “overexposure” to organic solvents. Although studies do not provide clear evidence of solvent-exposure-induced neurotoxic effects, ACA continues to recommend the use of the solvent neurotoxicity label statement for paint, coatings and other formulated products containing organic solvents. ACA further recommends a statement against deliberately inhaling solvents.

Accordingly, ACA continues to recommend the following statement:

NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.

Concern arose in the 1980s, especially in Scandinavia, about a potential link between decreased performance on certain neurobehavioral tests and workplace “overexposure” to organic solvents. The early studies lacked a clear dose-response relationship, so ACA contracted with Johns Hopkins University to undertake epidemiology studies on a cohort of exposed U.S. workers. The results of the ACA-sponsored studies were published in 1990-1991 in four peer-reviewed articles.¹ Although the collective studies showed no clear evidence of solvent-exposure-induced neurotoxic effects, they did note the following:

- “Painters’ syndrome,” a psycho-organic syndrome with a constellation of symptoms, was not found among the 187 workers at two paint manufacturing facilities.
- The olfactory system may be negatively impacted by solvent levels below occupational exposure limits; nonsmoking workers in the highest exposure category had smell-test scores below the fifth percentile for their age.

At a later date, ACA consulted with a board-certified toxicologist at Duke University (Durham, North Carolina) to see if updating the label statement was needed. The expert noted that sufficiently high exposures to some solvents can cause permanent structural damage to the brain, while other solvents cause anesthesia/narcosis symptoms due to membrane effects, which are generally reversible. No changes to the statement were made at that time.

The most recent information continues to indicate a general lack of correlation between occupational solvent exposure and neurotoxicity. A 2018 case-control study² of construction painters found lifetime solvent exposure did not correlate with reduced performance for overall domains of function (motor/perceptual speed, visual contrast, attention, working memory/planning, and visual and verbal memory). A 2015 review³ provided insights into occupational and clinical definitions of solvent-induced or chronic or toxic encephalopathies, and a 1998-1999 survey⁴ in the European Union found the need for common guidelines for the diagnosis of solvent-related chronic encephalopathy. A 2003 literature review⁵ confirmed that no dose-response relationship can be detected among the studies reviewed and noted a lack of coherence between the human and experimental animal data. The conclusion of a 1996 review⁶ appears to still hold: “There is no basis for a hypothesis of an existing discrete neurological syndrome that is causally related to low-level exposure (as defined by recent or current OELs [occupational exposure limits]) to organic solvents.”

Regarding the deliberate misuse of solvents as inhalants, the National Institutes of Health maintain websites⁷ on inhalant abuse and note that “many young people inhale the vapors from [household products that contain volatile solvents or aerosols] in search of quick intoxication without being aware that using inhalants, even once, can have serious health consequences.”

For the aforementioned reasons, ACA continues to recommend the use of the solvent neurotoxicity statement for paint, coatings and other formulated products containing organic solvents, unless there is objective evidence offered by the solvent supplier that the solvent has been tested for neurotoxic effects and found to be innocuous.

¹ Bleecker, M.L., Bolla, K.I., Agnew, J., Schwartz, B.S. and Ford, D.P., 1991. Dose-related subclinical neurobehavioral effects of chronic exposure to low levels of organic solvents. *American journal of industrial medicine*, 19(6), pp.715-728. Bolla, K.I., Schwartz, B.S., Agnew, J., Ford, P.D. and Bleecker, M.L., 1990.

Subclinical neuropsychiatric effects of chronic low-level solvent exposure in US paint manufacturers. *Journal of occupational medicine: official publication of the Industrial Medical Association*, 32(8), pp.671-677.

Ford, D.P., Schwartz, B.S., Powell, S., Nelson, T., Keller, L., Sides, S., Agnew, J., Bolla, K. and Bleecker, M., 1991. A quantitative approach to the characterization of cumulative and average solvent exposure in paint manufacturing plants. *American Industrial Hygiene Association Journal*, 52(6), pp.226-234.

Schwartz, B.S., Ford, D.P., Bolla, K.I., Agnew, J., Rothman, N. and Bleecker, M.L., 1990. Solvent-associated decrements in olfactory function in paint manufacturing workers. *American journal of industrial medicine*, 18(6), pp.697-706.

² Fiedler, N., Weisel, C., Nwankwo, C., Kipen, H., Lange, G., Ohman-Strickland, P. and Laumbach, R., 2018. Chronic Exposure to Solvents Among Construction Painters: Reductions in Exposure and Neurobehavioral Health Effects. *Journal of occupational and environmental medicine*, 60(12), p.e663.

³ Sainio Sr, M.A., 2015. Neurotoxicity of solvents. *Handbook of clinical neurology*, 131, pp.93-110.

⁴ Triebig, G. and Hallermann, J., 2001. Survey of solvent related chronic encephalopathy as an occupational disease in European countries. *Occupational and environmental medicine*, 58(9), pp.575-581.

⁵ Ridgway, P., Nixon, T.E. and Leach, J.P., 2003. Occupational exposure to organic solvents and long-term nervous system damage detectable by brain imaging, neurophysiology or histopathology. *Food and chemical toxicology*, 41(2), pp.153-187.

⁶ European Centre for Ecotoxicology and Toxicology of Chemicals, 1996. Technical Report No. 70: Chronic neurotoxicity of solvents. Brussels, Belgium. February.

⁷ <https://www.drugabuse.gov/publications/drugfacts/inhalants>

<https://www.drugabuse.gov/publications/research-reports/inhalants/letter-director>

15. Methylene Chloride

In March 2019, EPA finalized a rule banning distribution of methylene chloride (DCM) paint removal products for consumer use. The ban took effect on November 22, 2019. See [40 CFR 751](#)

EPA's regulatory action for this final rule consists of:

- (a) A prohibition on distribution in commerce of methylene chloride for paint and coating removal in containers with a volume of less than 55 gallons and 5 gallons for certain formulations; and
- (b) Downstream notification for products with methylene chloride that are not covered by the ban by August 26, 2019. This part requires manufacturers, processors, and distributors of methylene chloride for any use, excluding retailers, to provide downstream notification of the prohibitions by adding to sections 1(c) and 15 of the SDS the following language: "This chemical/product is not and cannot be distributed in commerce (as defined in TSCA section 3(5)) or processed (as defined in TSCA section 3(13)) for consumer paint or coating removal."

The rule also prohibits the distribution in commerce of methylene chloride in paint and coating removal products to and by retailers, where a distributor is considered a retailer if it supplies to at least one consumer or another retailer that provides to consumers. The rule includes record-keeping requirements for manufacturers, processors and distributors of methylene chloride.

Consumer products not covered by EPA's ban might be affected by requirements of the CPSC. On Sept. 14, 1987, the CPSC issued a "Statement of Policy" concerning products containing methylene chloride. Under this enforcement policy, CPSC took the position that methylene chloride and products containing it are "toxic" within the meaning of FHSA because they present a potential risk of cancer to humans.

Under FHSA, any hazardous substance intended or suitable for use in or around a household must bear appropriate cautionary labeling. The product labeling must meet all other FHSA requirements and address any other hazards presented by the product.

The CPSC modified its policy on methylene chloride with respect to paint stripping product in March 2018. With the subsequent EPA ban, CPSC's recommendations for paint strippers are no longer relevant. See [83 FR 12254](#)

For labeling requirements of industrial products containing methylene chloride, refer to OSHA Substance Specific Standard [29 CFR 1910.1052](#) and OSHA's Haz Com standard.

16. Ozone-Depleting Substances

The Clean Air Act Amendments of 1990 (CAAA), among other things, established a timely ban on chemicals known to contribute to the depletion of stratospheric ozone. The regulations developed pursuant to the CAAA also require (as of May 15, 1993) a warning label statement for products manufactured with an ozone-depleting substance:

Warning: Contains [name of substance] a substance which harms public health and environment by destroying ozone in the upper atmosphere.

To the extent that paint manufacturers are formulating a product with any of the identified ozone- depleting substances, this label must appear. Provisions of the regulations allow a manufacturer not to label in cases of incidental uses of ozone-depleting substances (i.e., when present as a contaminant in a paint raw material) or as a result of incidental contact with ozone-depleting substances in the manufacturing process. For information about labeling of volatile organic compounds, see *Chapter 7 – Labeling of Volatile Organic Compounds*.

17. Empty Containers

“Commercially empty” drums (drums that have been emptied by normal commercial practices but not yet purged) that once contained hazardous materials may retain hazardous residue. This residue can cause severe injury to those who divert such drums to other uses by cutting, welding or other forms of dangerous handling practices. Manufacturers may want to warn against these hazardous practices by considering the use of a special precautionary statement on the label. Listed below are samples of statements presently in use to cover this hazard.

ATTENTION!

THIS CONTAINER HAZARDOUS WHEN EMPTY

Since empty containers retain product residue (vapor or liquid), all labeled hazardous precautions must be observed. Do not reuse “empty package” without commercial cleaning or reconditioning.

ATTENTION!

Emptied containers may retain hazardous residue and explosive vapors. Keep away from heat, sparks, and flames. Do not cut, puncture or weld on or near this container. Follow label warnings until container is thoroughly cleaned or destroyed.

Similarly, supplemental statements may be considered for assisting product users in the recycling/disposal of empty containers.

18. Five-Gallon Open-Head Plastic Containers

CPSC recommends voluntarily affixing an additional pictorial label that identifies the potential child-drowning hazard associated with the reuse of these containers as household buckets. These child-drowning labels must be consistent with American Society for Testing and Materials (ASTM) Standard F1615-95 entitled “Cautionary Labeling for Five-Gallon Open-Head Plastic Containers.”

Note: As a practical matter, labels for all products in 4-6 gallon containers should also conform to the California state regulatory requirements, which include metal and plastic containers. A brief review of the requirements of ASTM Standard F1615-95 is contained in Chapter 3 of the guide, and Chapter 5 provides a review of the California requirements.

CPSC intends to enforce compliance with the voluntary ASTM Standard using its authority under Section 15 of the Consumer Product Safety Act (CPSA), 15 USC 2064. This provision allows CPSC to take a number of actions with respect to a product it determines to pose a “substantial product hazard.” As a result, the primary charge of CPSC staff seeking enforcement of the voluntary ASTM standard will be to determine whether unlabeled five-gallon plastic buckets are defective products which pose a substantial risk of injury to the public. In doing this, CPSC may elect to require companies found not to be labeling their products to provide detailed information justifying their decision to not conform to the voluntary standard.

19. Labeling of Hazardous Art Materials

CPSC implements requirements for the labeling of art materials at [16 CFR 1500.14\(b\)\(8\)](#). Here, CPSC adopts requirements of ASTM D 4236 *Practice for Labeling Art Materials for Chronic Health Hazards* as a regulation. CPSC is required to adopt ASTM D 4236 under the *Labeling of Hazardous Art Materials Act* (LHAMA), 15 USC 1277 [Pub. L. 100 695]. LHAMA describes a procedure used to develop precautionary labels for art materials and provides hazard and precautionary label statements developed from knowledge that exists in the scientific and medical communities.

CPSC included one clarifying note during codification regarding the standard’s requirement for a “board certified toxicologist” review. CPSC is primarily concerned that a reviewer has sufficient knowledge based on a combination of education, training, and experience, and that the reviewer uses appropriate criteria to recommend complete and accurate labeling. CPSC does require a board-certified toxicologist do all art material reviews. (See [16 CFR 1500.14\(b\)\(8\)](#) for additional explanation).

ASTM D 4236 applies only to products determined to be art materials. While ASTM defines “art materials” as those products intended for use in the creation of a work of art, the operating definition of “art materials” is contained in 16 CFR Part 1500.14

ASTM D 4236 requires that a toxicologist review art material formulations. It defines the term “toxicologist” as “any individual who through education, training, and experience has expertise in the field of toxicology, as it relates to human exposure, and is either a toxicologist or a physician certified by a nationally recognized certification board.”

20. Personal Protective Equipment (PPE)

PPE is a key component for reducing personal exposure to chemical(s) and chemical mixtures. PPE exists in a wide variety of types (i.e., respirators, gloves, eye protection), but is usually intended for very specific uses. Recommendations for personal protective equipment are usually found on (Material) Safety Data Sheets ((M)SDS). However, you may choose to include specific PPE statements on your product label or simply refer the end user to the product (M)SDS for recommended PPE. When recommending PPE, be as specific as possible (i.e., supplied air respirator, solvent impermeable gloves, glasses with side shields). The following are some suggested PPE statements.

Respirator Statements

Note: Information on the selection of respirators for specific exposure conditions is available free of charge from the National Institute for Occupational Safety and Health (NIOSH) at 4676 Columbia Parkway, Cincinnati, OH 45226, phone (513) 533-8287. Also, visit OSHA and NIOSH online and follow the links to respiratory protection: www.osha.gov and www.cdc.gov/niosh.

- A. Wear an appropriate, properly fitted respirator (NIOSH approved) during and after application. Follow respirator manufacturer's directions for use.
- B. Wear an appropriate, properly fitted respirator (NIOSH approved, with approved dust pre-filter) during application unless air monitoring demonstrates dust level is below applicable limits. Follow respirator manufacturer's directions for use.
- C. If properly used, a respirator may offer additional protection. Obtain professional advice before using. A dust mask does not provide protection against vapors. Do not use in basement or other unventilated areas.
- D. Avoid exposure to dust by wearing an appropriate NIOSH approved particulate respirator.
- E. An airline respirator (NIOSH approved) is recommended. (**Note:** also suitable for materials containing monomeric isocyanates).
- F. A vapor/particulate respirator (NIOSH approved) may be appropriate where airborne monitoring demonstrates vapor levels below 10 times the applicable exposure limits. Follow respirator manufacturer's directions for respirator use.
- G. Avoid exposure to dust by wearing an appropriate (NIOSH approved) particulate respirator during application, sanding and clean up.

Other Forms of PPE

- A. Use solvent-resistant eyewear with splashguards. Solvent-impermeable gloves, clothing and boots are recommended to prevent skin contact.
- B. Wear goggles or protective glasses with side shields.
- C. Wear impermeable protective gloves.
- D. Gloves are recommended to avoid prolonged or repeated contact with skin.
- E. Wear appropriate gloves to prevent skin contact.

21. Cure Volatiles

Other sections of this guide provide adequate guidance for hazard statements, health effects, and preventive measures associated with intentionally added product ingredients and their constituents.

An area that has not been addressed elsewhere in this guide is the formation or liberation of hazardous chemicals by coatings products while in the shipping container or during cure. While it is difficult to generalize due to variations in polymer types and curing mechanisms within a generic technology classification, this Guide includes some issues to consider in labeling these types of products.

Following are some specific examples of product types and suggested labeling language. Each manufacturer is encouraged to determine the applicability of these statements for its specific chemistries, based upon product knowledge.

Please note that the examples below include only those statements that were considered to be relevant to the potential exposure scenarios described. However, manufacturers should consider each of the labeling statements recommended for a particular chemicals in this guide to determine which are applicable to their specific technology and potential exposure situation. The following are examples of label statements that can be used when additional chemicals may be formed or liberated in the shipping container or during product cure.

Examples of Label Statements

A. Drying Oil/Alkyd Cure

Product:

- Contains a drying oil and/or alkyd resin, which may release small amounts of hexanal and other higher molecular weight aldehyde vapors during drying and curing.

Potential Hazard:

- Hexanal and other higher molecular weight aldehyde vapors may be released during drying and curing.

Potential Health Effects:

- Causes nose and throat irritation.

Precautionary Information:

- Provide fresh air ventilation during application, drying, and curing.
- Maintain flow of fresh air until all vapors (odors) are gone.

B. Urea/Melamine Cure

Product:

- Contains melamine/formaldehyde resin capable of cross-linking under processing conditions and releasing formaldehyde gas.

Potential Hazard:

- Formaldehyde gas can be evolved when the material is heated under processing conditions.

Potential Health Effects:

- Harmful if inhaled.
- Causes nose and throat irritation.
- Causes lung irritation.
- Causes eye irritation.
- Possible cancer hazard. May cause cancer based on animal data.
- Can cause (organ) damage.

Precautionary Information:

- Use only with adequate ventilation.
- Avoid breathing vapor.
- Avoid contact with eyes, skin and clothing.
- KEEP OUT OF REACH OF CHILDREN.

C. Blocking Agent Released During Cure

Product:

- Contains a blocked crosslinker that will release the blocking agent (i.e., MEKO, glycol ether) and may release small amounts of the crosslinker during crosslinking/curing at elevated temperature, i.e., baking.

Potential Hazard:

- Contains a blocked crosslinker that will release the blocking agent (name of the blocking agent) and may release small amounts of the crosslinker during oven curing (baking).

Potential Health Effects:

- (Use statements appropriate for the chemical(s)).

Precautionary Information:

- Proper exhaust and ventilation of ovens is necessary to control workplace concentrations.

22. Direct Food Contact Coatings

Food and Drug Administration (FDA) regulation of coatings as food-contact materials is at [21 CFR 175](#). Compounds used to make coatings for direct application to food contact surfaces must be formulated and manufactured in accordance with the Federal Food, Drug and Cosmetic Act (FFDCA). Coatings manufacturers must supply facility operators using their direct food contact coatings with a letter of guaranty that the product is formulated in compliance with FFDCA. Title 21, Code of Federal Regulations (CFR), Section 7.12 and 7.13 offer a detailed description of acceptable guaranties for compliance purposes, which, at a minimum must contain the following information:

- A statement that the materials complies with FFDCA and all applicable food additive regulations;
- Brand name, product code, or other designation which specifically identifies the material;
- Name and address of supplier;
- A description of the intended use and conditions for such use; and
- Signature of the official supplier.

23. Incidental Food Contact Coatings

Letters of guarantee are not required for paints and coatings used in construction or repair of surfaces not in direct contact with food (floors, walls, ceilings, etc.), and such products do not need to be formulated in conformance with the Federal Food, Drug and Cosmetic Act (FFDCA). The U.S. Department of Agriculture, under the Food Safety and Inspection Service (FSIS) has a directive (FSIS 11.300-14 (10/97)) which has established certain limitations for Incidental Food Contact Coatings used in federally inspected establishments:

- Paints and coatings may not contain the heavy metals antimony, arsenic, cadmium, chromium (except chromic oxide), lead, mercury, selenium, or any materials such as carcinogens, mutagens, and teratogens classified as hazardous substances. Carcinogens are those classified by the National toxicology Program (NTP) as known human carcinogens. The mutagens and teratogens are those substances classified by OSHA as reproductive hazards.
- Pesticidal coatings (e.g., containing biocides, fungicides, etc.) that require registration by the U.S. Environmental Protection Agency are not permitted to be used in food processing areas. Paints may contain antimicrobial agents to prevent microbial growth in the can or to protect the dry paint film.
- Some ingredients in paints and coatings (e.g. pigments) may contain, as impurities, compounds that are restricted. This does not preclude their use, provided the use and reasonably foreseeable misuse of the product would not result in a daily intake regarded as toxicologically insignificant.

Additional information on the restrictions for incidental food contact coatings can be obtained by contacting the Food Safety Inspection Service of USDA: <https://www.fsis.usda.gov/wps/portal/fsis/topics/regulatory-compliance/guidelines/1995-0001>

24. Small Packaging Labeling Guidance

The UNECE offers guidance for labeling small packagings in the [GHS, Rev. 8 \(2019\) at Section 1.4.10.5.4.4](#) at page 32.

Conclusion – Sample Labels and General Guidance

To create label, compile relevant pictograms, signal words, hazard statements and precautionary statements. In addition to the required GHS Statements, the label must include the following:

- a chemical identifier,
- the company name,
- company address and
- a telephone number where a user can receive additional information about the product and
- pictograms in a red 'square set on point,' which is large enough to see.

The sample labels below were “converted” from the *ACA Industry Labeling Guide, Fifth Edition* as Supplemented May 2005, to provide a corresponding GHS conforming label. The original and GHS- conforming labels have been included “side-by-side” to show comparison. In general, with the exception of the required pictograms under the GHS, label content, and even the labeling language are remarkably consistent. Many of the Precautionary Statements have important product specific language that must be considered when creating label.

Sample Label 1: Assigning Hazards OSHA HCS 2012


PRODUCT ABC
DANGER
Highly flammable liquid and vapor May be fatal if swallowed and enters airways
Causes serious eye irritation Causes skin irritation
May cause drowsiness or dizziness Suspected of damaging fertility
May cause damage to organs through prolonged or repeated exposure
Prevention: Keep away from heat/sparks/open flames/hot surfaces. No smoking. Keep container tightly closed. Ground/Bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Wear protective gloves/eye protection/face protection. Wash [insert appropriate areas] thoroughly after handling. Use only outdoors or in well-ventilated area. Avoid breathing dust/fume/gas/mist/vapors/spray. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not eat, drink or smoke when using this product.
Response: In case of fire, use [appropriate media, specified by the manufacturer/supplier or the competent authority] to extinguish. If on skin (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower. If on skin: Wash with plenty of soap and water. Take off contaminated clothing and wash before re-use. If skin irritation occurs, seek medical advice/attention. If swallowed, or you feel unwell: Immediately call a poison control center or doctor/physician. Do NOT induce vomiting. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention. Specific treatment (see ... on this label). If inhaled: Remove to fresh air and keep at rest in a position comfortable for breathing. If exposed or concerned: Get medical attention/advice.
Storage: Store locked in a well-ventilated place. Keep cool.
Disposal: Dispose of contents/container in accordance with local/regional/national/international regulations.
Company name and address Telephone Number

Sample Label 2: Extremely Flammable Substances OSHA HCS 2012

PRODUCT ABC DANGER  Highly flammable liquid and vapor Causes serious eye damage Causes severe skin burns and eye damage May cause drowsiness or dizziness May cause damage to organs through prolonged or repeated exposure Prevention: Keep away from heat/sparks/open flames/hot surfaces. No smoking. Keep container tightly closed. Ground/Bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Wear protective gloves/clothing wear eye /face protection. Wash [insert appropriate areas] thoroughly after handling. Do not eat, drink or smoke when using this product. Do not breathe dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. Response: In case of fire, use [appropriate media] to extinguish. If on skin (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a Poison control center or doctor/physician if you feel unwell. Wash contaminated clothing before reuse. If swallowed: Rinse mouth. Do NOT induce vomiting. If inhaled: Remove to fresh air and keep at rest in a position comfortable for breathing. Specific treatment (see ... on this label). Get medical advice/attention if you feel unwell. Storage: Store locked in a well-ventilated place. Keep cool. Keep container tightly closed. Disposal: Dispose of contents/container in accordance with local/regional/national/international regulations. Company name and address Telephone Number

The required GHS statements are essentially the same for all categories of Flammable Liquids.

Sample Label 3: Methylene Chloride OSHA HCS 2012

PRODUCT ABC DANGER  May Cause Cancer Fatal if swallowed Causes severe skin burns and eye damage Prevention: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wash [insert appropriate areas] thoroughly after handling. Do not eat, drink or smoke while using this product. Wear protective gloves/protective clothing/eye protection/face protection. Response: If exposed or concerned: Get medical attention/advice. If swallowed, or you feel unwell: Immediately call a poison center or doctor. Specific treatment (see... on this label). Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. If inhaled: Remove victim to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Storage: Store locked up. Disposal: Dispose of contents/container in accordance with local/regional/national/international regulations. Company name and address Telephone Number
--

Although the ECHA database only reports a Carcinogenicity Classification, due to industry practice Skin Corrosion / Irritation and Acute Toxicity – Oral were added.

Sample Label 4: Polyisocyanates OSHA HCS 2012

PRODUCT ABC DANGER Causes skin irritation May cause an allergic skin reaction Causes serious eye irritation  Fatal if inhaled May cause allergy or asthma symptoms or breathing difficulties if inhaled May cause respiratory irritation Suspected of causing cancer Prevention: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wash [insert appropriate areas] thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Avoid breathing dust/fume/gas/mist/vapor/spray. Contaminated work clothing should not be allowed out of the workplace. Do not breathe dust/fume/gas/mist/vapor/spray. Use only outdoors or in well-ventilated area. [In case of inadequate ventilation] Wear respiratory protection. Response: If on skin: Wash with plenty of soap and water. Specific treatment is urgent (see ...on this label). If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. If inhaled: Remove victim to fresh air and keep comfortable for breathing. Immediately call a poison center/doctor if you feel unwell. If experiencing respiratory symptoms: Immediately call a poison center/doctor. If exposed or concerned: Get medical advice/attention. Storage: Store in well-ventilated place. Keep container tightly closed. Store locked up. Disposal: Dispose of contents/container in accordance with local/regional/national/international regulations. Company name and address Phone Number

Sample Label 4 was prepared using the ECHA harmonized classification for Toluene Diisocyanate from Table 2, Chapter 2.

Sample Label 5: Powder Coatings OSHA

PRODUCT ABC

DANGER



Toxic if swallowed.

May cause an allergic skin reaction.

Causes serious eye damage.

Toxic if inhaled.

May cause genetic defects.

May Cause damage to organs through prolonged or repeated exposure
May form combustible dust in concentrations in air

Prevention: Wash [insert appropriate areas] thoroughly after handling. Do not eat, drink or smoke while using this product. Avoid breathing dust/fume/gas/mist/vapor/spray. Use only outdoors or in well-ventilated area. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves. Wear eye protection/face protection.

Response: If swallowed, or you feel unwell: Immediately call a poison center/doctor. Specific treatment (see... on this label). Rinse mouth. If on skin: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If inhaled: Remove victim to fresh air and keep comfortable for breathing.

Storage: Store locked up. Store in well-ventilated place. Keep container tightly closed.

Disposal: Dispose of contents/container in accordance with local/regional/national/international regulations

Company name and address

Phone Number

CHAPTER 5 – CARCINOGENS: APPROACHES TO CLASSIFICATION AND LABELING FOR CONSUMER AND INDUSTRIAL PRODUCTS

Introduction.....2

General Notes on Classification of Carcinogens, Respirable
Dust and Other Particulate Hazards in Wetted Mixtures 2

OSHA’s Classification Criteria for Carcinogens 3

California’s Prop. 65 Labeling Criteria and Labeling of
Crystalline Silica and Titanium Dioxide 4

Consumer Product Safety Commission’s Classification
Criteria for Carcinogens 5

EU CLP Regulation’s Criteria for Classification of
Carcinogens and Classification of Titanium Dioxide.....6

Sample Label – Architectural Waterborne Coatings
Containing Crystalline Silica 8

Introduction

Classification of carcinogens can require evaluation of a complex set of factors and data including consideration of conclusions of authoritative bodies. This chapter provides an overview of classification and labeling requirements for carcinogens as required by OSHA (Occupational Safety and Health Administration); California's the Safe Drinking Water and Toxic Enforcement Act ("Prop. 65"); Consumer Product Safety Commission; and the EU's Regulation on the Classification, Labelling and Packaging of Substances and Mixtures, (EC) No 1272/2008 ("CLP Regulation"). This chapter includes information about conditional classifications for titanium dioxide and crystalline silica, under some regulatory programs, providing examples of challenges in applying classification criteria.

Note, this guide only discusses specific regulatory labeling requirements; it does not address a manufacturer's potential obligations under state tort laws, such as product liability laws. Manufacturers are advised to consult their legal counsel and/or other professionals to address any such obligations.

General Notes on Classification of Carcinogens, Respirable Dust and Other Particulate Hazards in Wetted Mixtures

The OSHA Hazard Communication Standard (Haz Com) requires chemical manufacturers to evaluate the hazards of their products, affecting classification of carcinogens and possibly affecting classification of respirable dusts and other particulate hazards. OSHA's 2012 Hazard Communication Standard, by adopting the GHS, moved away from strict "official listing" classification approaches to carcinogens used prior to 2012, depending entirely on designation by the NTP (National Toxicology Program) or another recognized authoritative body. Manufacturers considering the classification of particulates in mixtures may consider classification criteria used for carcinogens under OSHA Haz Com and/or GHS-based classification.

A key consideration for classification is the "availability for exposure," presented by particulates when "bound" in a wetted-paint or coatings mixture. Given the published findings of IARC and California's OEHHA (Office of Environmental Health Hazard Assessment), the "availability for exposure" factor has resulted in clear moderating statements on carcinogen classifications. IARC's monographs, for example, include the following mitigating statement for carbon black and titanium dioxide as present in paints and coatings:

FOR CARBON BLACK

"Operators in user industries who handle fluffy or pelleted carbon black during rubber, ***paint and ink production are expected to have significantly lower exposures to carbon black than workers in carbon black production.*** Other workers in user industries who handle it occasionally have little opportunity for exposure.

And further...

"End-users of these products (rubber, ink or paint) are unlikely to be exposed to airborne carbon black particles, which are bound within the product matrix."

"Many workers were exposed to carbon black in bound matrices such as paint or rubber. It is probable that workers exposed to carbon black in this study were exposed to lower levels than those in other studies."

FOR TITANIUM DIOXIDE

"No significant exposure to primary particles of titanium dioxide is thought to occur during the use of products in which titanium dioxide is bound to other materials, such as in paints."

SOURCE: IARC Monograph on Carbon Black and Titanium Dioxide
<http://monographs.iarc.fr/ENG/Monographs/vol93/index.php>

California's OEHHA issued similar language for classification under California's Safe Drinking Water and Toxic Enforcement Act (Prop. 65), when issuing a Safe Use Determination for crystalline silica.

"Most of the crystalline silica particles in the paints were above respirable size (10 µm) and partitioned out of the respirable paint aerosol when the aerosol was generated. This is the likely reason for the lack of crystalline silica detection in respirable wet paint aerosol under these testing conditions. Since NPCA (now ACA) took a reasonable approach in its effort to measure crystalline silica from the spraying activity, i.e., the pooling of filters, **OEHHA believes the wet aerosol portion of the exposure may be much less toxicologically significant than that produced from the dusts that result from sanding.**

A number of factors may tend to increase or decrease estimates of exposure relative to the approach used to develop the exposure levels described above. **We believe, on the whole, that the assumptions made are likely to have resulted in overestimates of exposure levels from the average use of interior flat latex paint."**

SOURCE: OEHHA "Safe Use Determination for Crystalline Silica
http://www.oehha.org/prop65/CRNR_notices/safe_use/sylicasud2.html

Considering these authoritative findings as to particulates integrated in a wetted mixture or otherwise bound in a mixture, it may not be required to include a hazard warning for these particulates as carcinogens in an industrial paint or coating product if it is bound in a matrix. The decision not to include a hazard warning must be limited to carcinogens in dusts, respirable dusts, aerosolized particles or particulates that have no or benign availability for exposure because the particulate of concern is bound in a paint or coating or similar other finding.

Manufacturers must provide warnings for other hazard classifications associated with wetted mixtures, for example when a classification is based on other acute or chronic health hazards or physical hazard classifications.

Although the obligation to provide warnings for respirable dust is not clearly required for a wetted mixture, some manufacturers choose to provide such warnings, to cover for sanding and abrasion, after application.

The sample label provided at the end of this chapter includes language used to warn of respirable dusts during sanding. Although this the sample label is designed for consumer architectural paints, manufacturers of industrial products may use similar language in labels.

OSHA's Classification Criteria for Carcinogens

OSHA adopts a self-classification approach with criteria specified in Annex A, part 6 of the OSHA Haz Com standard, with the option to recognize classification of authoritative bodies. OSHA classifies based on inherent properties of a chemical and not risk, defining a carcinogen as:

A substance or a mixture of substances which induce cancer or increase its incidence. Substances and mixtures which have induced benign and malignant tumors in well-performed experimental studies on animals are considered also to be presumed or suspected human carcinogens unless there is strong evidence that the mechanism of tumor formation is not relevant for humans.

Classification of a substance or mixture as posing a carcinogenic hazard is based on its inherent properties and does not provide information on the level of the human cancer risk which the use of the substance or mixture may represent.

OSHA's HazCom adopts hazard categories from the GHS, 3rd Revision, including:

Category 1A: Known human carcinogens, largely based on human evidence

Category 1B: Presumed human carcinogens, largely based on animal evidence

Category 2: On a case by case basis, scientific judgment may warrant a decision of presumed human carcinogenicity derived from studies showing limited evidence of carcinogenicity in humans together with limited evidence of carcinogenicity in experimental animals.

Cut-off value in mixtures is 0.1% for both categories. If a Category 2 carcinogen ingredient is present in the mixture at a concentration between 0.1% and 1%, information is required on the SDS for a product. However, a label warning is optional. If a Category 2 carcinogen ingredient is present in the mixture at a concentration of $\geq 1\%$, both an SDS and a label is required and the information must be included on each. (see Table A.6.1)

In lieu of classifying a substance or mixture, a manufacturer, importer or employer may recognize classification from the following authoritative bodies:

- National Toxicology Program (NTP), “Report on Carcinogens” (latest edition)
- International Agency for Research on Cancer (IARC) “Monograph on the Evaluation of Carcinogenic Risks to Humans” (latest edition)
- Where OSHA requires a classifying company to consider carcinogenicity for a chemical in 29 CFR 1910, Subpart Z, a manufacturer must classify it as a carcinogen for hazard communication.

Mixtures

OSHA states:

A mixture may be classified based on the available test data for the mixture as a whole. In such cases, the test results for the mixture as a whole must be shown to be conclusive taking into account dose and other factors such as duration, observations and analysis (e.g., statistical analysis, test sensitivity) of carcinogenicity test systems.

(Appendix A, Section A.6.3.2)

Mixtures can also be classified by their ingredients using bridging principles at Appendix A, Section A.0.5

Hazard Communication

OSHA specifies required signal words, hazard statements, pictogram (health hazard pictogram) and precautionary statements in [Appendix C, Section C.4.9](#) of the OSHA Haz Com standard.

California’s Prop. 65 Labeling Criteria and Labeling of Crystalline Silica and Titanium Dioxide

California’s OEHHA maintains a list of carcinogens recognized by the State of California. As described at [27 CAADC § 25306](#), OEHHA “determines that an authoritative body has formally identified the chemical as causing cancer or reproductive toxicity, as specified in this section.” Formal identification occurs when an authoritative body publicly lists, reports or documents a chemical as a carcinogen through a process involving peer review, public engagement or official adoption as specified in [§25306\(d\)](#).

California requires “sufficient evidence” of carcinogenicity. Sufficient evidence can be human studies showing a causal relationship between the chemical and cancer or animal evidence. Animal evidence must indicate an increased incidence of malignant tumors or combined malignant and benign tumors in multiple species or strains, in multiple experiments (e.g., with different routes of administration or using different dose levels), or, to an unusual degree, in a single experiment with regard to high incidence, site or type of tumor, or age at onset.

OEHHA is authorized to determine that a chemical designated by an authoritative body does not satisfy the definition of “causing cancer” for listing in Prop. 65, where the authoritative body did not consider scientifically valid data clearly establishing that the chemical does not meet the sufficiency of evidence required for listing. [§25306\(f\)](#)

OEHHA recognizes the following as authoritative bodies for the identification of chemicals as causing cancer:

- (1) International Agency for Research on Cancer
 - (2) National Institute for Occupational Safety and Health
 - (3) National Toxicology Program
 - (4) U. S. Environmental Protection Agency
 - (5) (5) U. S. Food and Drug Administration
- [§25306\(m\)](#)

Proposition 65 List

An updated version of the Prop. 65 list is available on OEHHA's website. OEHHA provides the list in various formats, for download, scrolling online or searchable by chemical identity.

Crystalline Silica

OEHHA listed [crystalline silica \(of airborne particles of respirable size\)](#) on the Prop. 65 list on October 1, 1988. The listing includes an exemption ([Safe Use Determination](#)) for [crystalline silica in interior flat latex paint](#). The Safe Use Determination applies to interior flat latex paints containing 6% crystalline silica, or less, with diatomaceous earth as the sole source of crystalline silica.

Titanium Dioxide

On September 2, 2011, [OEHHA listed titanium dioxide of airborne](#), unbound particles of respirable size as a carcinogen. The listing is based on an IARC Monograph designating a Group 2B classification.

OEHHA explains its decision:

In 2010, IARC published Volume 93 of its series, IARC Monographs on the Evaluation of Carcinogenic Risks to Humans (IARC, 2010b). IARC concluded that (1) there is sufficient evidence in experimental animals for the carcinogenicity of titanium dioxide and (2) titanium dioxide is “possibly carcinogenic to humans” (Group 2B). Therefore, this substance meets the requirements of both Labor Code sections 6382(b)(1) and (d).

[\(Notice of Intent to List Titanium Dioxide, May 27, 2011, OEHHA\)](#)

Consumer Product Safety Commission's Classification Criteria for Carcinogens

CPSC regulates hazardous consumer products that meet defined criteria as being be toxic, corrosive, flammable or combustible, an irritant, a strong sensitizer or those that generate pressure through decomposition, heat or other means. Carcinogens, as defined by CPSC, must be labeled as toxic consumer products, using label elements specified in Chapter 3 of this guide.

Toxicity criteria for carcinogens is at [16 CFR 1500.135](#), designating carcinogens into three categories:

- (1) Known human carcinogens (by “sufficient evidence” in humans) and
- (2) Probable human carcinogens (by “limited evidence” in humans or “sufficient evidence” in animals, excluding animal studies shown not to be relevant to humans); or
- (3) possible human carcinogens (by limited animal evidence)

“Sufficient evidence” of Carcinogenicity in Animals

Sufficient evidence of carcinogenicity requires that the substance has been tested in well-designed and conducted studies (e.g., as conducted by National Toxicology Program (NTP), or consistent with the Office of Science Technology Assessment and Policy (OSTP) guidelines) and has been found to elicit a statistically significant ($p < 0.05$) exposure-related increase in the incidence of malignant tumors, combined malignant and benign tumors, or benign tumors if there is an indication of the ability of such benign tumors to progress to malignancy:

- A. In one or both sexes of multiple species, strains, or sites of independent origin; or experiments using different routes of administration or dose levels; or
- B. To an unusual degree in a single experiment (one species/strain/sex) with regard to unusual tumor type, unusual tumor site, or early age at onset of the tumor.

The presence of positive effects in short-term tests, dose-response effects data, or structure-activity relationship are considered additional evidence.

CPSC provides additional details in its Chronic Hazard Guidelines at [57 Fed. Reg. 46626, 46633 \(Oct. 9, 1992\)](#).

EU CLP Regulation's Criteria for Classification of Carcinogens and Classification of Titanium Dioxide

In the EU, the CLP Regulation includes criteria for hazard classification of substances as carcinogens in Annex I, Section 3.6. Substances are allocated into one of two categories based on strength of evidence and additional considerations (weight of evidence). In certain instances, route-specific classification may be warranted, if it can be conclusively proved that no other route of exposure exhibits the hazard.

Substances are classified into two categories where Category 1 denotes known or presumed human carcinogens, and Category 2 denotes suspected human carcinogens. Category 1 consists of Category 1A, known human carcinogens based on human evidence and Category 1B, presumed human carcinogens, based on animal evidence. Both are classified at $\geq 0.1\%$ in mixture. Category 2, suspected human carcinogens, is derived from limited evidence of carcinogenicity in human studies or from limited evidence of carcinogenicity in animal studies. It is classified at $\geq 1.0\%$ in mixture.

Mixtures

Classification of mixtures is described in §3.6.3.2.1 of the CLP:

Classification of mixtures will be based on the available test data for the individual ingredients of the mixture using concentration limits for the ingredients classified as carcinogens. On a case-by-case basis, test data on mixtures may be used for classification when demonstrating effects that have not been established from the evaluation based on the individual ingredients. In such cases, the test results for the mixture as a whole must be shown to be conclusive taking into account dose and other factors such as duration, observations, sensitivity and statistical analysis of carcinogenicity test systems. Adequate documentation supporting the classification shall be retained and made available for review upon request.

General Guidance for Classification as Carcinogens under the CLP

The European Chemicals Agency (ECHA) provides additional guidance about classification of carcinogens in [Section 3.6 of the CLP Regulation](#) and starting at page 376 of its [Guidance on Application of the CLP Criteria \(Version 5.0, July 2017\)](#)

Hazard Communication for Carcinogens under the CLP

The EU CLP includes hazard communication requirements in Section 3.6 of the CLP, [Table 3.6.3](#), varying by category.

Titanium Dioxide Classification under the EU CLP

In February 2020, the European Commission codified its classification of titanium dioxide (TiO_2) as a Category 2b carcinogen by inhalation in the 14 ATP (Adaptation to Technical Progress) of the CLP Regulation. Following an 18-month transition period, the classification is enforceable as of October 1, 2021.

The classification applies to mixtures in powder form containing 1% or more of titanium dioxide particles with aerodynamic diameter ≤ 10 micrometers. "Aerodynamic diameter" refers to the particles suspended in air. Analytical methodology must be specific to the aerodynamic diameter specification.

Product labels would be required to identify TiO_2 as "Suspected of causing cancer" and include the GHS health hazard pictogram.



The classification includes notes that provide additional context. In “Note V,” the Commission addresses fibers, requiring additional classification for fibers of specified size. “Note W” provides important context to the classification of Poorly Soluble Particles of Low Toxicity generally. In Note W, the Commission explains:

It has been observed that the carcinogenic hazard of this substance arises when respirable dust is inhaled in quantities leading to significant impairment of particle clearance mechanisms in the lung. This note aims to describe the particular toxicity of the substance; it does not constitute a criterion for classification according to this Regulation.

In Note 10, the Commission repeats the classification parameters of the powder form of specified size.

The Commission includes special labeling requirements for liquids and solids containing titanium dioxide in [the Annex to the classification](#).

The result will be that products containing TiO₂ will require new warnings. For example:

- **Mixtures in powder form containing** 1% or more of titanium dioxide which is in the form of or incorporated in particles with aerodynamic diameter ≤ 10 µm. This is likely to result in the majority of TiO₂ powder mixtures being classified as they are likely to contain the requisite threshold percentage of powder form with the aerodynamic diameter less than 10 µm. Such product labels would be required to identify TiO₂ as a “Suspected of causing cancer” and include the GHS health hazard pictogram, below.
- **Liquid mixtures** containing 1 % or more of titanium dioxide particles with aerodynamic diameter equal to or below 10 µm will need to bear the following statement: “Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist.”
- **Solid mixtures** containing 1 % or more of titanium dioxide (regardless of the presence of respirable dust) shall bear the following statement: “Warning! Hazardous respirable dust may be formed when used. Do not breathe dust.”

The regulation will also require changes to manufacturer safety datasheets (SDS).

Sample Label – Architectural Waterborne Coatings Containing Crystalline Silica

For architectural waterborne paint products with health hazard effects from crystalline silica.* This should be incorporated in instances where it is reasonably known that the paint product will be sanded or spray applied. If the product to be labeled has ingredients that contribute hazards either other than or in addition to those shown, label statements to cover those hazards must be added to, or substituted for, the statements shown on this label.

For a two-panel label,
split here and add:
"Read other cautions
on back/side panel."
[16CFR1500.121(a)(3)]

WARNING!

Cancer hazard: Contains Crystalline Silica, which can cause cancer. Risk of cancer depends on duration and level of exposure to dust generated from sanding surfaces or spray mists.

Use only with adequate ventilation. Do not breath spray mist or dust. Ensure fresh air entry during application and drying. If you experience eye watering, headache or dizziness or if air monitoring demonstrates vapor/mist levels are above applicable limits, wear an appropriate, properly fitted respirator (NIOSH approved) during and after application. Avoid exposure to dust by wearing an appropriate (NIOSH approved) particulate respirator during application, sanding and clean up. Follow respirator manufacturer's directions for respirator use. Close container after each use. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling.

First Aid: If you experience difficulty breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical attention immediately.

KEEP OUT OF REACH OF CHILDREN

Company name and address

*NOTE: On December 26, 2003, NPCA received a Safe Use Determination under California's Proposition 65 regulations pursuant to the Office of Environmental Health Hazard Assessment's authority under Section 12204, Title 22 of the California Code of Regulations for crystalline silica in interior flat latex paints containing 6% crystalline silica, or less, with diatomaceous earth as the sole source of crystalline silica. Thus, manufacturers may remove the Proposition 65 cancer warning from the labels of interior flat latex paints if they contain 6%, or less, crystalline silica and the sole source of that crystalline silica is from diatomaceous earth.

CHAPTER 6 – STATE AND LOCAL LAWS & REGULATIONS

Introduction.....2

California Proposition 65 (Safe Drinking Water and
Toxic Enforcement Act of 1986) 2

State Right To Know Regulations 3

 New Jersey Labeling Requirements 3

 Commonwealth of Pennsylvania 5

 Commonwealth of Pennsylvania SDS/Labeling Procedures 6

 New Jersey/Pennsylvania Labeling Requirements
 Summary Comparison.....7

 Commonwealth of Massachusetts 8

Miscellaneous State Regulations 9

 Industrial Containers and Buckets – California and
 CPSC Recommendations.....9

 Connecticut Spontaneous Combustion Labeling 11

 Summary of the Connecticut Requirements 11

 California Cleaning Product Right to Know Act of 2017 11

Introduction

This section provides an overview of select state-level toxics labeling and right-to-know laws and introduces issues related to conflict-of-laws and federal pre-emption. Users must check the state laws where they conduct business to assess whether compliance with federal law is sufficient to meet state laws or whether additional state law requirements apply. This section is not meant to provide an exhaustive list of state laws. Companies placing products on the market must review requirements of jurisdictions where products are marketed to evaluate all compliance obligations.

California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)

The principal objectives of the Safe Drinking Water and Toxic Enforcement Act of 1986 are to protect the state's drinking water sources from toxic contamination and to warn the consuming public of possible carcinogenic and reproductive hazards associated with certain identified chemicals. The law requires the governor of California to identify and publish a list of chemicals "...known to the state of California to cause cancer or reproductive harm." (California Health & Safety Code Sec. 25249.5 and .13). Implementing regulations for this state ballot initiative, "Prop 65," took effect in 1988.

Eighteen months after a particular chemical is first included on the list, it is unlawful to knowingly discharge even trace amounts of the chemical into air, water, or land, which, presumptively, would find its way into a source of drinking water. There are two exceptions to the discharge provisions. Listed materials may be disposed of at permitted solid waste disposal facilities or publicly owned treatment works.

The act also requires that the presence of a listed chemical be communicated with a "clear and reasonable warning" to those exposed, within 12 months of listing on the Prop. 65 chemicals list. (Note: The listed chemical must be present in amounts sufficient to allow exposure during use to reach the established risk threshold under Proposition 65. As a practical matter, many manufacturers, including paint manufacturers, provide the warnings whenever a listed chemical is known to be present. However manufacturers may undertake a defensible risk assessment to provide an appropriate basis for not warning. Manufacturers should confer with their professional legal and technical advisors when considering this option. Professional judgement must be considered.)

Labeling is only one of the options for conveying the message. Other optional modes might include, but are not limited to point-of-sale posting, placarding, advertisements, invoices, or SDSs distributed as part of a workplace hazard communication program.

ACA's Prop. 65 Guidance Document provides additional information.

[The Prop. 65 Chemical List](#) is available through the website of California's OEHHA (Office of Environmental and Health Hazard Assessment)

Additional information is also available through [OEHHA's Prop. 65 website](#).

Workplace warnings are covered at [27 CA ADC §25606](#) of the Prop. 65 regulations. Companies can comply with OSHA's Hazard Communication Standard for the Prop. 65 listed chemical, providing SDS and labels as required under the OSHA Hazard Communication Standard for the hazard identified by the State of California (carcinogen and/or reproductive toxin) in the Prop. 65 list. "Safe harbor" label statements identified in Prop. 65 regulations for consumer products are not required for workplace products when complying with OSHA's Hazard Communication Standard. When choosing OSHA Hazard Communication to comply with Prop. 65, manufacturers commonly identify a chemical ingredient as a Prop. 65 listed chemical in Section 15 of the SDS ("Regulatory Information" section), although this is not required under Prop. 65 or the OSHA Hazard Communication Standard.

Court decisions further emphasize several aspects of Proposition 65 compliance and enforcement in the occupational setting which should benefit paint manufacturers. These include:

1. Employers covered by Proposition 65 may comply with the occupational warning requirements of the law by complying with the Federal OSHA or California OSHA (Cal OSHA) Hazard Communication Standard provisions.
2. Cal OSHA is responsible for assuring that enforcement of its Hazard Communication Standard and Proposition 65 results in worker protection that is “at least as effective, and not inconsistent with” the requirements of the federal standard.
3. The Cal OSHA requirements for its Hazard Communication Standard, including the Proposition 65 aspects, may not be enforced against out-of-state manufacturers.

The court decisions have not affected requirements for conveying warnings on consumer paint products sold at retail outlets to individuals (for household use) or to residential or commercial painting contractors.

For information about Prop. 65 consumer product warning language, methods or conveyance, label placement, etc. See [ACA's Prop. 65 Guidance Document](#). ACA membership username and password required is required to access this link.

Safe Use Determination for Crystalline Silica

On December 26, 2003, ACA (then known as NPCA) received a [Safe Use Determination under California's Proposition 65 regulations pursuant to the Office of Environmental Health Hazard Assessment's authority under Section 12204, Title 22 of the California Code of Regulations for crystalline silica](#) in interior flat latex paints containing 6% crystalline silica, or less, with diatomaceous earth as the sole source of crystalline silica. Thus, manufacturers may remove the Proposition 65 cancer warning from the labels of interior flat latex paints if they contain 6%, or less, crystalline silica and the sole source of that crystalline silica is from diatomaceous earth.

State Right To Know Regulations

New Jersey Labeling Requirements

The New Jersey right-to-know law requires covered employers to label containers that are used, stored, or manufactured in New Jersey (see [NJSA 34:5A-1 et. seq.](#)). The implementing regulations are found at [NJAC 8:59, Subchapter 5](#). [New Jersey's RTK Guidance for Private Sector Employers](#) also provides a useful overview.

Additional information is available at the [New Jersey Department of Health's Right to Know Website](#).

Covered “employers” are those persons or corporations engaged in business operations having a specified NAICS Code at [NJAC 8:59-11.3](#). This includes all the manufacturing industries in the chemical and allied fields. As such, all paint, printing ink, caulk, sealant and adhesive manufacturers are covered employers.

New Jersey requires additional labeling, known as the “universal labeling requirements,” that go beyond requirements of OSHA Haz Com. OSHA Haz Com does not pre-empt New Jersey's universal requirement since New Jersey's requirement does not interfere with the fundamental purpose of OSHA Haz Com and the specific labeling requirements do not conflict with OSHA's. (See *New Jersey Chamber of Commerce v. Huey*, 868 F.2d 621 (3rd Cir. 1989)).

Under New Jersey's universal labeling requirement, containers at facilities must be labeled with the following:

1. The chemical name and CAS number of ALL hazardous substances*; and
2. The name of the five most predominant substances in the container, or the trade secret registry number assigned to the substance.
3. Any hazardous substances, specified on New Jersey's Right to Know List, in amounts below the top five except if they are below 1%, (or below 0.1% for carcinogens, mutagens, and teratogens).

Common names may be substituted for chemical names of the substances.

If more than one percent of the contents of the container are unknown, the label should specify “Contents Unknown” or “Contents Partially Unknown.” Employers must make a good faith effort to determine the contents of products. A good faith effort is interpreted to be two requests by letter and/or documented phone calls to suppliers.

The labeling requirements do not apply to:

1. Products labeled in compliance with FIFRA;
2. Containers labeled in compliance with the Department of Transportation shipping regulations at 49 CFR;
3. Containers of waste materials labeled in compliance with RCRA;
4. Products labeled in compliance with FDCA regulations; and
5. All primary use containers that are two kilograms (4.4 pounds) or two liters (0.53 gallons) or smaller, with the following exceptions:
 - a. The container size exemption does not apply to products that contain carcinogens, mutagens or teratogens listed on the Special Health Hazard Substance List (see NJAC 8:59-10.2). Only the chemical name(s) and CAS number(s) of the carcinogens, mutagens or teratogens must be listed on the product label; other ingredients do not need to be listed.
 - b. The container size exemption does not apply to products that contain flammable, reactive, or corrosive substances which are listed on the Special Health Hazard Substance List, and that meet the Special Health Hazards Substance List's criteria for flammability, reactivity or corrosivity (See NJAC 8:59-10.2). Only the chemical name(s) of the flammable, reactive or corrosive substances that contribute to the Special Health Hazard of the product need to be listed on the product label; other ingredients do not need to be listed.

In addition, consumer products (containers that are two kilograms (4.4 pounds) or two liters

(0.53 gallons) packaged for distribution and use by the general public do not need to comply with the labeling requirements.

Containers must be labeled before they are opened or within five working days of arriving at the facility, whichever is sooner. No employer is permitted to use the contents of a container that is not labeled. For products that are delivered in skids, only those containers on the outside face of the skid and within reach of an employee need to be labeled. If the skid is shrink-wrapped, labels must be placed on all four sides of the skid. Once containers are removed from the skid, they must be immediately labeled.

In addition to containers, labeling is required for in-plant pipelines, storage tanks, wastewater treatment tanks, vents, process lines, etc. An exception is process containers that are changed at least once per shift or that contain ten gallons or less of a substance transferred from a labeled container so long as it is used by the employee who performed the transfer.

New Jersey has specific regulations addressing the designation of trade secrets. Employers who wish to claim trade secrets should consult the regulations at NJAC 8:59, Subchapter 3.

The New Jersey hazardous substance list is different from other lists and is subject to change. A current list is available online at the [Department of Health's Hazardous Substances, Right to Know website](#).

Additional information is available from the [Department of Health's Right to Know website](#).

Commonwealth of Pennsylvania

Labeling Requirements

The [Pennsylvania Worker and Community Right to Know Act](#) (35 PS Section 7 301 to 320), enacted in 1984, with implementing regulations at [Pennsylvania Administrative Code, Title 34, Section VIII](#) applies to anyone who conducts business in Pennsylvania. The Act requires employers to comply with labeling requirements in addition to those required by OSHA. Moreover, OSHA Haz Com does not pre-empt Pennsylvania Right to Know requirements below since the Pennsylvania requirements serve a broader public purpose of protecting the environment, the public at large and notifying police, fire and emergency response personnel of hazards. (See *Manufacturer's Association of Tri-County v. Knepper*, 801 F. 2d 130 (3rd Cir. 1990)).

Labeling requirements of the Pennsylvania regulation are specified for chemicals included on a hazardous substance list. Those substances designated “s” are special hazardous substances, and those designated as “E” are environmental hazards.

Labeling specifications apply to hazardous chemicals, non-hazardous chemicals, substances, and mixtures:

- Containers of hazardous substances must be labeled with the chemical or common name, a hazard warning and name, address, and telephone number of the manufacturer.
- Containers of hazardous mixtures must be labeled with the common or trade name, the chemical or common name of special hazardous substances constituting 0.01 percent or more of the mixture, the chemical or common name of hazardous substances constituting 1.0 percent or more of the mixture, a hazard warning and the name, address, and telephone number of the manufacturer.
- A hazardous mixture is defined as a mixture that contains one or more hazardous substances, in a concentration of 1.0 percent or greater. It also includes a mixture that contains one or more special hazardous substances or environmental hazards in concentrations of 0.01 percent or greater.
- Containers of single chemicals must be labeled with the chemical or common name, a hazard warning if appropriate and the name, address, and telephone number of the manufacturer.
- Containers of chemical mixtures must be labeled with the common or trade name, a hazard warning if appropriate, the chemical or common name of either the top five substances by volume or those substances constituting 5.0 percent or more of the mixture and the name, address, and telephone number of the manufacturer.

There are several exemptions from the labeling requirements. Containers labeled in accordance with the following federal statutes are exempt from Pennsylvania's requirements: FIFRA; FDCA; Federal Alcohol Administration Act; and hazardous waste under RCRA/CERCLA. In addition, cosmetics, tobacco products and sealed products intended for the general public are not subject to the above labeling requirements. Labels compliant with the Pennsylvania regulation are required on containers delivered or produced within the state as well as in plant pipelines, tanks, etc., that are open to the environment or subject to employee exposure.

Pennsylvania does NOT require up front registration of trade secret claims with the state and trade secret ingredients need not be identified by CAS number on the label — you may provide a generic term with the words “trade secret” in place of the specific substance. However, you may be required to reveal and justify trade secrets at some future time, so be certain that anything you claim as trade secret is indeed a true trade secret.

The Pennsylvania list of chemicals is periodically updated. The current list is available online as Appendix A to the implementing regulations, as referenced in Section 323.5 of the regulations. The Pennsylvania Department of Labor updates the online list upon publication of changes in the Pennsylvania Bulletin. The department can change the list only after providing notice and a comment period to the public.

Additional information is available on the Worker and Community Right to Know webpage of the Pennsylvania Department of Labor and Industry.

Commonwealth of Pennsylvania SDS/Labeling Procedures

Pennsylvania requires declaration of hazardous substances and nonhazardous substances subject to content criteria. Hazardous substances are further subcategorized into special hazardous substances — subject to SDS/label disclosure at lower percentage content — and environmental hazards which have no SDS/label significance. This information is contained in Chapter 323 and Appendix A of the Pennsylvania right to know law.

A step by step procedure for preparation of Pennsylvania SDS and labels would include the following:

A. Classify ingredients into the three categories:

1. Special hazardous substances
2. Hazardous substances
3. Nonhazardous substances

It may be helpful to prepare a chart of all current raw materials, listing the three Pennsylvania categories.

B. Prepare SDS chemical information, listing ingredients in the three categories subject to the following content percentages:

1. Special hazardous substances, 0.01 percent or above
2. Hazardous substances, 1 percent or above
3. Nonhazardous substances, 3 percent or above

C. Ingredients must be identified by chemical name, trade name or common name and CAS number, or identified as trade secrets if the CAS number is unavailable or protected subject to the provisions of the regulation. The label must disclose the following information:

1. The top five ingredients (hazardous or nonhazardous)
2. Special hazardous substances, 0.01 percent or more
3. Hazardous substances, 1 percent or more

Identification must be by chemical name or common name. The label must also include a hazard warning and the name, address, and telephone number of the manufacturer as noted above.

New Jersey/Pennsylvania Labeling Requirements Summary Comparison

Pennsylvania (35 PS Section 7 301 to 320)		New Jersey (NJSA 34:5A 1 et seq.)
Over 2000 chemicals listed including 303 special hazardous substances and 683 environmentally hazardous substances	Hazardous Substances	2054 workplace hazardous substances, approximately half special hazardous substances and 166 environmentally hazardous substances
CAS and common name on SDS/common name on label	Chemical Names	CAS or common name as listed on label
Required on SDS	CAS Number	Required on label; no SDS requirement
Required to label top five ingredients or any ingredient over 5 percent; required on SDS if over 3 percent	Nonhazardous or Unknown Components	Required to label top five ingredients even if nonhazardous. May use "Contents (partially) Unknown" for unknown ingredients
One percent hazardous; 0.01 percent special or environmental hazardous substances	Cutoffs for Labeling Hazardous Components	One percent hazardous; 0.1 percent carcinogens/mutagens/ teratogens
Tobacco articles; consumer products; foods; drugs and cosmetics; sealed containers moving in 20 days; R&D laboratories	Exemptions	Mixtures less than one percent (total less than 500 pounds); items as established by Department of Health
Labeling only; Pesticides; RCRA wastes		Labeling only; Pesticides; RCRA wastes; foods; drugs; cosmetics; radioactives; DOT chemical names; R&D chemicals with a coded system; and consumer products
Indicated claim is made on SDS	Trade Secrets	State approval and registry number on label
Labels; SDS; environmental surveys	Additional Requirements	Labels; fact sheets; workplace emergency and environmental surveys
Manufacturer and seller doing business in-state	Party Responsible	In-state employers by specified codes

Commonwealth of Massachusetts

Labeling Requirements

The Massachusetts Right-to-Know Law became effective in 1984. Initially, the law applied to both the private and public sector in Massachusetts. However, it was pre-empted for the private sector in 1988 by the Federal OSHA Hazard Communication Standards. Therefore, the Massachusetts Right-to-Know Law only applies to state, county and municipal workplaces in Massachusetts; and by agency policy, compliance with OSHA's Hazard Communication Standard in these workplaces meets the requirements of the Massachusetts Right-to-Know Law. Manufacturers should be aware, however, in order to ensure products entering State, county and municipal workplaces in Massachusetts conform with the Massachusetts Right-to-Know Law, where applicable.

The Massachusetts Right-to-Know Law is available at [Massachusetts General Laws \(MGL\) Chapter 111F](#). Implementing regulations are available online at: [105 CMR 670.000](#), [310 CMR 33.00](#), [454 CMR 21.00](#), and [Massachusetts Division of Occupational Safety's Implementation Manual](#).

Under the law, the state publishes a list of toxic and hazardous substances known as the Massachusetts substances list, subject to labeling and SDS requirements. Covered employers have the option of assuming any hazardous chemical, as defined by OSHA's Hazard Communication Standard at 29 CFR 1910, is considered hazardous for the purpose of the act. (See [DOS Implementation Manual](#), p. 14-15).

The labeling requirements are found in Section 7 of the statute [MGL Chapter 111F] and 454 CMR 21.05 of the regulations. Covered employers have the option of complying with labeling requirements of OSHA's Hazard Communication Standard. (See [DOS Implementation Manual](#), p. 15) Under Massachusetts Right-to-Know regulations, each container of toxic or hazardous substance must be labeled with the chemical name. Containers of mixtures shall be labeled with the chemical name of each toxic or hazardous substance in the mixture. For mixtures, toxic or hazardous substances are present if they are one percent or more of the mixture or two percent if they exist as an impurity (454 CMR 21.05[6] and Chapter 111F[4][d]). However, if the substance is an extraordinarily hazardous substance, it is considered present if the concentration is greater than one part per million (105 CMR 670.010[d]). Substances designated as extraordinarily hazardous are identified with an *E* following their name in the Massachusetts substance list.

Section 7 also contains several exceptions to the labeling requirements. Containers of toxic or hazardous substances that are less than one gallon are not required to be labeled. In addition, the employer is not required to label any container which already is labeled in compliance with regulations of: (1) U.S. Department of Transportation (DOT); (2) FIFRA; (3) Federal Atomic Energy Act, and (4) Federal Food, Drug and Cosmetics Act. Therefore, as a practical matter, paint and coatings products shipped in drums would be considered in compliance with the labeling requirements if the container is labeled in compliance with DOT regulations (111F[7][c]). Five gallon containers in compliance with DOT requirements would also be considered in compliance. Furthermore, if the product is packaged in gallon or less containers, the container is exempt from the labeling requirements (111F[7][b]).

Miscellaneous State Regulations

Industrial Containers and Buckets – California and CPSC Recommendations

To address concerns about the potential for a child drowning in industrial containers, the state of California passed a law requiring labeling. The law requires a manufacturer, distributor, or seller of four-gallon to six-gallon, inclusive, straight sided, slightly tapered, open head industrial containers intended for use, sale, distribution, or any other purpose within the state, regardless of origin, to apply a detailed and specific precautionary label for each industrial container prior to shipment into commerce.

The requirements for four to six gallon container labeling were mandated in the statute and include pictorial representations of a child “falling” into the bucket with appropriate hazard warnings. Industrial containers manufactured after September 1, 1993, by statute, must be labeled according to the following requirements:

- A. The label(s) must be a permanent paper, plastic or silk screened or an offset printed label that can only be easily removed using tools or solvents.
- B. The label(s) can be in either of the following forms:
 - i. One label at least six inches high, by at least two inches wide, and a minimum total area of 17 square inches. The label must be on the side of the container near where the handle is inserted. The top half of the label should be in English and the bottom half of the label should be in Spanish; or
 - ii. Two labels at least five inches high, by two and three-quarters inches wide (or larger). One label should be placed on each side of the container near where the handle is inserted. The label on one side should be in English and the label on the other side should be in Spanish.
- C. The label must contain on a contrasting background the word “WARNING” in block print and the words “Children Can Fall Into Bucket and Drown—Keep Children Away From Buckets With Even a Small Amount of Water.”
- D. The label must contain a picture of a child reaching into an industrial container, an encircled slash and a triangle with an exclamation point on a contrasting background before the word “WARNING”. (For an example, see pictorial on the following page.)

Requirements are noted at [Cal. Health and Safety Code §108625, et. seq. \(Ca. HSC, Div. 104, Part 3, Ch. 5\)](#).

Additional information on four gallon to six-gallon industrial container labeling in California can be obtained by calling ACA's Government Affairs Division at (202) 462 6272, or ACA's California Paint Council at (916) 454-5435.

Note: The Consumer Product Safety Commission (CPSC) recommends voluntarily affixing an additional pictorial label on all 4-6 gallon plastic and steel containers that identifies potential child drowning hazards associated with the reuse of these containers as household buckets. These child drowning labels must be consistent with ASTM Standard F1615-95 entitled “Cautionary Labeling for Five-Gallon Open-Head Plastic Containers.” For further details, refer to Chapter 4, “Product Specific Labeling Considerations,” under the section, “Five Gallon Open Headed Plastic Containers.”

Combined Label (English and Spanish). This pictorial is not to scale.



Note: If you choose the second label format option (see B ii on the previous page), basically you split the above label by placing the English portion of this label (with the pictorial) on one side of the container (near where the handle attaches), and the Spanish portion (with the pictorial) on the opposite side of the container (near where the handle attaches).

Connecticut Spontaneous Combustion Labeling

Experience has shown that improperly managed or disposed rags, paper and other items which have been used for applying or cleaning up drying oils and drying oil products may ignite through the process of spontaneous combustion. The *ACA Industry Labeling Guide* has long included recommended precautionary labeling (see Chapter 4, “Product Specific Labeling Considerations,” Spontaneous Combustion) for products whose formulation or anticipated use may warrant identification of a spontaneous combustion hazard.

Summary of the Connecticut Requirements

[Connecticut Public Act No. 94-73](#), established requirements for precautionary labeling of certain products sold or distributed in Connecticut. This statute was passed in May 1994 with the strong support of the Connecticut Department of Consumer Protection, which sought to compel specific precautionary labeling language on the spontaneous combustion hazard associated with the disposal of rags containing drying oil and drying oil products.

This legislation applies to drying oil and drying oil products. Manufacturers must include the required labeling on wood treatment or wood finish products (sold or distributed in Connecticut containing the specific listed natural oils and other oils which have the necessary characteristics (e.g., unsaturated fatty acids)) to be considered a drying oil (**Note:** Drying oils, such as linseed oil, tung oil, and perilla oil are defined as containing a substantial portion of fatty acid with three double molecular bonds. Drying oil products are defined as wood treatment or wood finish products containing a drying oil, as defined above.

The statute directs use of the following specific label warning language:

DANGER—RAGS, STEEL WOOL OR WASTE SOAKED WITH (INSERT PRODUCT NAME) MAY SPONTANEOUSLY CATCH FIRE IF IMPROPERLY DISCARDED. IMMEDIATELY AFTER USE, PLACE RAGS, STEEL WOOL OR WASTE IN A SEALED WATER-FILLED METAL CONTAINER.

A conspicuous label warning which includes the Connecticut required wording is recommended for applicable products. Adopting the Connecticut wording for all such products, regardless of whether the products are marketed in Connecticut or not, allows for one label for products distributed nationally.

California Cleaning Product Right to Know Act of 2017

[The California Cleaning Product Right to Know Act of 2017](#) requires manufacturers of designated products to disclose on the product label either: 1) a list of intentionally added ingredients listed on designated lists; or 2) all intentionally added ingredients. See [Section 108954](#) for labeling requirements. The labeling requirement took effect on January 1, 2020. The act includes requirements for ingredient disclosure on a manufacturer’s website effective January 1, 2021. See [Section 108954.5](#) of the act.

Manufacturers should note that designated products are defined under this statute to include general cleaning products, polishes or floor maintenance products used primarily for janitorial, domestic, or institutional cleaning purposes, among other products. Therefore, the scope of the law could potentially include some sealants, waxes or other products used for cleaning or maintenance. The definition of covered products is briefly outlined below, and is complex. ACA has not determined whether any specific coating product or product type is regulated by the act. Manufacturers are encouraged to carefully review the scope of the act and determine whether it applies to any given product.

The act applies to “designated products,” “automotive products,” “general cleaning products,” and “air care products,” as defined below:

“Designated product” means a finished product that is an air care product, automotive product, general cleaning product, or a polish or floor maintenance product used primarily for janitorial, domestic, or institutional cleaning purposes. “Designated product” does not mean any of the following:

- (1) Foods, drugs, and cosmetics, including personal care items such as toothpaste, shampoo, and hand soap.
- (2) Industrial products specifically manufactured for, and exclusively used in the following:
 - A. Oil and gas production
 - B. Steel production
 - C. Heavy industry manufacturing
 - D. Industrial water treatment
 - E. Industrial textile maintenance and processing other than industrial laundering
 - F. Food and beverage processing and packaging
 - G. Other industrial manufacturing processes

“General cleaning product” means a soap, detergent, or other chemically formulated consumer product labeled to indicate that the purpose of the product is to clean, disinfect, or otherwise care for fabric, dishes, or other wares; surfaces including, but not limited to, floors, furniture, countertops, showers, and baths; or other hard surfaces, such as stovetops, microwaves, and other appliances.

“Automotive product” means a chemically formulated consumer product labeled to indicate that the purpose of the product is to maintain the appearance of a motor vehicle, as defined in Section 670 of the Vehicle Code, including products for washing, waxing, polishing, cleaning, or treating the exterior or interior surfaces of motor vehicles.

“Automotive product” does not include automotive paint or paint repair products.

“Air care product” means a chemically formulated consumer product labeled to indicate that the purpose of the product is to enhance or condition the indoor environment by eliminating unpleasant odors or freshening the air.

CHAPTER 7 – LABELING FOR EMISSIONS FROM VOLATILE ORGANIC COMPOUNDS:FEDERAL, STATE AND LOCAL REQUIREMENTS

Federal Labeling Requirements for Architectural and Industrial Maintenance (AIM) Coatings and Consumer Products 2

 Labeling of Volatile Organic Compounds 3

State Labeling of Architectural and Industrial Maintenance Coatings and Consumer Products 3

 I. California Air Resources Board Consumer Product Rules and Suggested Control Measures 3

 II. California’s South Coast Air Quality Management District (SCAQMD) Rule 1113 4

 III. Ozone Transport Commission Rules 4

 OTC Model Rule Phase II 4

 OTC Model Rule Phase I (2001) 4

 IV. Lake Michigan Air Directors Consortium (LADCO) 4

 V. SCAQMD Rule 443 – Labeling of Solvents 5

Aerosol Coatings 5

 Labeling for Maximum Incremental Reactivity and/or Volatile Organic Compound Content 5

Federal Aerosol Coatings Requirement 5

State-Level Requirements for Aerosol Coatings 5

Labeling Requirements Under CARB’s Reactivity Regulation 6

Labeling Requirements Under the Remaining Mass-Based VOC Rules 6

Bay Area Air Quality Management District’s (BAAQMD) Rule 49 6

Southwest Clear Air Agency (Washington State) 7

Federal Labeling Requirements for Architectural and Industrial Maintenance (AIM) Coatings and Consumer Products

To reduce contribution to ozone from VOCs (Volatile Organic Compounds) in paint, EPA finalized the AIM (Architectural and Industrial Maintenance) Rule under the Clean Air Act in 1998.

EPA has codified the AIM Rule at 40 CFR 59, Subpart D.

EPA provides additional guidance on its webpage for Architectural Coatings: National Volatile Organic Compounds Emission Standards.

EPA has also issued standards for consumer products at 40 CFR 59, Subpart C.

The AIM rule applies to manufacturers and importers of AIM coatings that are manufactured after **September 13, 1999**, with a delayed effective date of March 10, 2000 for architectural coatings registered under the Federal Insecticide, Fungicide and Rodenticide Act (7 USC Section 136, et. seq.,) (FIFRA).

Rules for architectural and industrial maintenance coatings affect a wide array of formulated coatings products designed for field application and/or commercial and industrial use. The AIM Rule specifies requirements by product categories. More generally, EPA defines architectural coatings and industrial maintenance coatings as follows:

Architectural coating means a coating recommended for field application to stationary structures and their appurtenances, to portable buildings, to pavements, or to curbs. This definition excludes adhesives and coatings recommended by the manufacturer or importer solely for shop applications or solely for application to non-stationary structures, such as airplanes, ships, boats, and railcars.

Industrial maintenance coating means a high performance architectural coating, including primers, sealers, undercoaters, intermediate coats, and topcoats formulated and recommended for application to substrates exposed to one or more of the following extreme environmental conditions in an industrial, commercial, or institutional setting:

1. Immersion in water, wastewater, or chemical solutions (aqueous and nonaqueous solutions), or chronic exposure of interior surfaces to moisture condensation;
2. Acute or chronic exposure to corrosive, caustic, or acidic agents, or to chemicals, chemical fumes, or chemical mixtures or solutions;
3. Repeated exposure to temperatures above 120 °C (250 °F);
4. Repeated (frequent) heavy abrasion, including mechanical wear and repeated (frequent) scrubbing with industrial solvents, cleansers, or scouring agents; or
5. Exterior exposure of metal structures and structural components.

Covered products include interior and exterior paints, traffic markings, and sign paints. Manufacturers and importers of any of the 61 categories of architectural coatings are subject to the AIM rule and must ensure that the VOC content of the coating does not exceed the applicable limits in Table 1 of Subpart D (at 40 CFR 59), unless they utilize the exceedance fee (at 40 CFR 59.403) or tonnage exemption (at 40 CFR 59.404).

The exceedance fee is an annual fee paid on the excess VOC amount per coating over the total volume manufactured at the rate of \$0.0028 per gram of excess VOC, as specified at 40 CFR 59.403. The tonnage exemption allows production of coatings in excess of limits where the aggregate VOC tonnage is 10 tons or less, calculated as specified in the rule at 40 CFR 59.404.

For the purpose of meeting VOC limits, each coating must be classified by the manufacturer or importer under one of the categories in Table 1 of Subpart D – the definition for each category can be found in 40 CFR 59.401. If the coating does not meet any of the category definitions, then it must be classified as either a flat or non-flat coating (depending on its gloss level). The limits in Table 1 of Subpart D apply to the VOC content that would result after thinning according to the manufacturer's recommendations.

Labeling of Volatile Organic Compounds

EPA's AIM Rule includes national-level labeling requirements at 40 CFR 59.405. AIM products must be labeled with:

- Date of manufacture
- Manufacturer's recommendation regarding thinning
- VOC content
- Product description using standardized statements in the regulation
- Specified statements indicating recycled coating content

Generally, state and local VOC labeling requirements follow the National AIM rule. However, some rules require additional labeling for certain categories of coatings. In addition, the rules may vary as to content limits, category listings and definitions, effective dates and sell through periods, and recordkeeping and reporting requirements. The following is a brief overview of where certain state and local requirements differ from the EPA National AIM rule for labeling purposes. A manufacturer must review requirements for relevant product categories to determine label variations.

ACA members can access additional information about AIM VOC Regulations on the AIM VOC Committee Website including an interactive AIM VOC Map; AIM VOC Comparison Table, Exempt Compounds Table and California Air District AIM Rule Adoption summary table. ACA member login is required.

State Labeling of Architectural and Industrial Maintenance Coatings and Consumer Products

The EPA National AIM rule currently establishes labeling requirements that apply anywhere in the United States and territories except in certain states and local districts that have adopted more stringent standards either individually or by recommendation of a regional-level consortium of states.

The following establish more stringent requirements than the National AIM Rule:

- California,
- Ozone Transport Commission states (OTC),
- Maricopa County, Arizona,
- Several Lake Michigan Air Directors Consortium (LADCO) states
- Colorado
- Utah (7 counties)

Since there is always the possibility that other states/localities will adopt rules more stringent than the federal standards, coatings manufacturers must review and comply with VOC labeling requirements for each of the localities where product(s) will be sold or for the intended location of use.

A map showing states with more stringent requirements is available on [ACA's AIM VOC Committee](#) webpage.

ACA has also developed [a map of consumer product regulations by state](#), available on the [ACA Consumer Products Committee webpage](#).

I. California Air Resources Board Consumer Product Rules and Suggested Control Measures

In California, the local air districts have jurisdiction over industrial processes while the California Air Resources Board (CARB) has jurisdiction over consumer products. CARB's consumer products rule can be found in Article 2: Regulation for Reducing Emissions from Consumer Products.

CARB publishes Suggested Control Measures (SCMs) with VOC limits and labeling requirements. Regional air quality management districts within the State of California adopt and implement these SCMs ([links to the various CARB SCMs](#)). The 35 California Air Districts follow either the EPA National AIM Rule; the 2000 SCM; 2007 SCM; 2019 SCM or 2020 SCM. A California Air District AIM Rule Adoption summary table can be found on the AIM VOC Committee Website.

II. California's South Coast Air Quality Management District (SCAQMD) Rule 1113

The SCAQMD's Rule 1113 is the most stringent VOC emission standard in the United States. The SCAQMD covers Los Angeles County and the surrounding areas of Orange County, Riverside County and San Bernardino County. For a listing of covered cities see SCAQMD District's Listing of Covered Cities. Rule 1113 c can be found [here](#).

This rule requires date of manufacture for coatings or colorants; label statements for thinning recommendations and VOC content; special label statements for rust preventative coatings, specialty primers, concrete-curing compounds, and faux finishing; The rule also includes a recycling coatings provision that requires a letter to the Executive Officer.

III. Ozone Transport Commission Rules

The Ozone Transport Commission (OTC) is a multi-state organization formed under the Clean Air Act to advise EPA and address regional issues surrounding ground-level ozone in the Northeast and Mid-Atlantic regions. A complete listing of affected states is available on OTC's website.

In this capacity, the OTC issues model rules that are adopted by states. OTC model rules are based on the National AIM rule, CARB's SCM and SCAQMD's Rule 1113, with some variations in both the model rules and state adoption that could affect labels. OTC has two model rules affecting AIM coatings: the Phase I Rule (2001) and the Phase II Rule (2011). OTC has published status of state-level adoption in an Excel file on its website under Model Rules, Regulatory and Technical Guidelines, under materials for 2019.

OTC has a series of model consumer products rules, too, with the latest being the OTC Phase V Model Rule for Consumer Products (2018).

OTC has published the OTC Model Rule for Industrial Adhesives and Sealants (2006).

OTC Model Rule Phase II

The Ozone Transport Commission updated its Model Rule for AIM Coatings to Phase II (2011) in June 2011. The regulation is available on the OTC website in the section for Model Rules, Regulatory and Technical Guidance under the heading for 2011.

The Phase II rule includes labeling requirements in Section 4. Labeling requirements expand on requirements included in the federal rule, explaining specifications for labeling date of manufacture, thinning recommendations, and VOC content. OTC Phase II includes required label statements for faux finishing, industrial maintenance, clear brushing lacquers, non-flat-high-gloss, rust preventive, specialty primers, sealers, and undercoaters, quick dry enamels, reactive penetrating sealers, reactive penetrating carbonate stone sealers, stone consolidates, wood coatings, and zinc rich primers.

Several OTC states have adopted rules similar to the OTC Phase II rule. Please refer to the AIM VOC Map found on the AIM VOC Committee website, which includes links to the various rules. Please review each individual state rule for the effective dates.

OTC Model Rule Phase I (2001)

OTC's Phase I Model Rule was issued in 2001. The key difference between the 2011 and 2001 Model Rules is in updates (in 2011) of VOC content labeling requirements and addition or modification of specific label statements for several product types.

Several states currently implement the 2001 OTC Model Rule, please refer to the AIM VOC Map found on the AIM VOC Committee website, which includes links to the various rules. Please review each individual state rule for the effective dates.

IV. Lake Michigan Air Directors Consortium (LADCO)

States surrounding Lake Michigan formed the Lake Michigan Air Directors Consortium (LADCO) in 1989 to coordinate policies addressing interstate air pollution and Clean Air Act compliance. Current LADCO members include: Illinois, Indiana, Michigan, Wisconsin, Ohio, and Minnesota. LADCO focuses on air monitoring and modelling to equip member states to develop joint approaches to air pollution control.

LADCO does not issue model rules. Rather, it encourages members to follow OTC model rule adoption. Illinois, Indiana, and Ohio have adopted rules consistent with OTC's Model Rule (2002). Minnesota, Michigan, and Wisconsin follow the National AIM rule. Please refer to the AIM VOC Map found on the AIM VOC Committee website, which includes links to the various LADCO rules. Please review each individual state rule for the effective dates.

V. SCAQMD Rule 443 – Labeling of Solvents

Manufacturers must label products with organic solvent sold in containers of sizes of 1 quart up to 40 gallons with information stating whether the solvent is photochemically reactive, as defined in Rule 102.

Manufacturers must label products with organic solvents sold in containers of 40 gallons or more with the total percentage by volume of the solvents listed under the definition of photochemically reactive solvent in Rule 102.

Rule 443 is available online.

Similarly, SCAQMD requires additional labeling for coatings, excluding architectural coatings, containing VOCs. These requirements are detailed in Rule 443.1 – Labeling of Materials Containing Organic Solvents.

Aerosol Coatings

Labeling for Maximum Incremental Reactivity and/or Volatile Organic Compound Content

Regulations applicable to aerosol coatings currently exist at the federal level and in the States of California, Portland, Oregon, and Washington. In Canada, the Province of Vancouver has an aerosol coatings requirement.

Federal Aerosol Coatings Requirement

Federal Aerosol Coatings requirements are at [40 CFR Part 59, Subpart E](#).

The regulation defines an aerosol coating product at [40 CFR Part 59.503](#):

Aerosol Coating Product means a pressurized coating product containing pigments or resins that is dispensed by means of a propellant and is packaged in a disposable can for hand-held application, or for use in specialized equipment for ground traffic/marketing applications. For the purpose of this regulation, applicable aerosol coatings categories are listed in Table 1 of this subpart.

Labeling requirement is contained in [Section 59.507](#). Covered products must be labeled with:

- Aerosol coating category code from Table 1 or from a company-specific code with adequate explanation.
- The applicable product-weighted reactivity (PWR) limit from Table 1.
- Day, month and year of manufacture or a code indicating the same.
- Name and a contact address for the responsible manufacturer, distributor, or importer.

¹ "MIR" is the maximum incremental reactivity and means the maximum change in weight of ozone formed by adding a compound to the mixture of reactive organic gases utilized in deriving the MIR scale. Instead of establishing VOC content limits as a "percent volatile organic compounds by weight" or a percentage of the formula, reactivity standards are stated in terms of a "product-weighted MIR value." CARB's aerosol rule contains such standards for different types of aerosol categories.

State-Level Requirements for Aerosol Coatings

Under California's Clean Air Act, CARB has authority to regulate aerosol coatings, with an exception for the San Francisco Bay Area, with the Bay Area AQMD's Rule 49 still in effect. CARB adopted its aerosol rule, [17 CCR Article 3, Sections 94521, et. seq.](#), in June 2000, becoming the first rule to implement a reactivity standard, measuring ozone formation potential, rather than a mass-based requirement.

Prior regulations implementing a mass-based standard include:

- CARB's prior mass-based rule for the state of California,
- California Bay Area's [Rule 8-49](#),
- SWAPCA's 493-200 (Vancouver, Washington), and
- OAR 340-22-910 (Portland, Oregon).

With some exceptions, these rules contained identical VOC standards and labeling requirements.

CARB's aerosol rule has been in effect since July 18, 2001. In effect, manufacturers must ensure that aerosol coatings meet reactivity and the remaining mass-based standards. In addition, manufacturers must consider labeling requirements of California's reactivity regulation and the remaining VOC regulations.

Labeling Requirements Under CARB's Reactivity Regulation

CARB's aerosol labeling requirement is at [17 CCR Article 3, Sections 94524](#).

Covered aerosols are required to display three items on the label:

- Applicable reactivity limit for the product, i.e., a product-weighted MIR value;
- Aerosol coatings category or an abbreviation of the category as specified in the rule; and
- Day, month, and year on which the product was manufactured, or a code indicating such date.

The above information must be readily observable without removing or disassembling any portion of the product container or packaging, and it may be displayed on the bottom of the container so long as it is clearly legible without removing any packaging.

Manufacturers may use codes or abbreviations to convey any of the required information; however, an explanation of the code or abbreviation must be submitted to the CARB Executive Officer prior to use of the code.

Labeling Requirements Under the Remaining Mass-Based VOC Rules

The mass-based rules in the Bay Area, Portland, Oregon and Vancouver, Washington require that the following information be readily observable upon handheld inspection without removing or disassembling any package:

- Maximum VOC content of the product (the standard as established in the rule);
- Spray paint category or abbreviation of such category as defined in the rule; and
- Date of manufacture of the product or a code indicating such.

Bay Area Air Quality Management District's (BAAQMD) Rule 49

The Rule is available at: [Section 8-49-401](#)

Each container of any aerosol paint product manufactured for sale, sold, or offered for sale within the BAAQMD shall be permanently and exclusively labeled by coating type and shall display the maximum organic compound content expressed as percent VOC.

¹ While CARB has sole authority to regulate aerosol coatings under the California Clean Air Act, the Bay Area's rule is still enforceable because it was promulgated pursuant to a court order. Therefore, the CARB rule for aerosol coatings governs all of California except for the Bay Area.

² The reactivity standards replaced extremely stringent VOC standards that were scheduled to become effective during 1999. The text of the final regulation order can be downloaded from ACA's Spray Paint Manufacturers Committee webpage at <http://www.paint.org/member/committee/spmc.htm>

Portland Air Quality Management Area OAR 340-22-910 (Portland, Oregon)

The following information should be readily observable upon handheld inspection without removing or disassembling any packaging:

1. Maximum VOC content of the product, expressed as a percentage by weight;
2. Spray paint category or abbreviation of such category as defined in the regulation;
3. Date of manufacture of the product, or a code indicating such date.

Southwest Clear Air Agency (Washington State)

SWCAA (Southwest Clean Air Agency) prescribes requirements for aerosols in [Rule 493—200](#). The provisions of this regulation apply within the Southwest region of Washington State in the counties of Clark, Cowlitz, Lewis, Skamania, and Wahkiakum Counties.

CHAPTER 8 – PESTICIDES

- I. Introduction.....2
- II. Labeling and Packaging Requirements 2
 - A. Prototype Labeling Requirements 2
 - B. Packaging Requirements 2
- III. Summary of Pesticide Registration for a New Pesticide Product.....3
- IV. Procedure for Product Registration 3
 - A. Determining Whether FIFRA Requires Product Registration 3
 - B. Procedures for Obtaining a FIFRA Registration.....4
 - C. Application Procedures for Pesticide Registrations 4
 - D. Data Submission Requirements 5
- V. Standard Treated Article Labeling Claims for Paints and Other Formulated Coatings.....5
- VI. Assignment of Registration to Private Labeler or Distributor 6
- VII. State Registration Requirements 6
- EPA Prototype Sales Label 7

I. Introduction

This chapter provides general guidance on the regulations issued by the U.S. Environmental Protection Agency (EPA) under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) (codified at 7 USC 136 et. seq.). Manufacturers of paints and coatings who determine that their products may be subject to FIFRA regulations should *not* rely solely on this general overview as a means of compliance.

FIFRA regulations can be found at [40 CFR Parts 150 189](#). Manufacturers should take care to ensure that they know and have conformed to current EPA requirements.

EPA's online [Pesticide Registration Manual](#) provides a comprehensive guide for registering pesticide products, complete with references to additional EPA guidance and links to registration forms.

[Pesticide Registration and Certification Forms](#) are also available on EPA's website.

Additional information is available on [EPA's Office of Pesticides](#) website and its [Pesticide Registration](#) site.

EPA also maintains an online archive of [Pesticide Registration Notices](#) addressing specific registration issues.

II. Labeling and Packaging Requirements

A. Prototype Labeling Requirements

Pesticide product labels are required to contain extensive information. Guidance in preparing label text for pesticide products appears at the end of this chapter, including regulatory citations specifying requirements for each portion of the label. As required at 40 CFR 156.10(a)(1), a pesticide label must show clearly and prominently the following label elements:

- a. Name, brand, or trademark under which the product is sold
- b. Name and address of the producer, registrant, or person for whom produced
- c. Net contents
- d. Product registration number
- e. Producing establishment number
- f. An ingredient statement
- g. Warning or precautionary statements
- h. Directions for use
- i. Use classification(s)

B. Packaging Requirements

A pesticide product must be distributed and sold in a child resistant package if all of the following criteria apply [[40 CFR 157.22](#)]:

- The product meets one or more of the toxicity criteria in [40 CFR 157.22\(a\)](#);
- Labeling either directly recommends residential use or can be interpreted to permit residential use; and
- The product does not qualify for an exemption under [40 CFR 157.24](#).

The regulations also specify the data necessary to justify an exemption, the standards and protocols for effectiveness and compatibility, certification procedures, and recordkeeping requirements [[40 CFR 157.24](#)].

Pesticide products for application on marine pleasure craft (antifouling) are subject to this rule. All other special packaging requirements for consumer products are issued by the Consumer Product Safety Commission pursuant to its authority under the *Poison Prevention Packaging Act* of 1970.

III. Summary of Pesticide Registration for a New Pesticide Product

As discussed below, paint and coatings products that serve a pesticidal purpose must be registered as a pesticide under FIFRA, including antifouling coatings. An overview of the registration process follows:

1. Obtain and complete appropriate application ([Part 152.50](#)).
2. Include a list and a summary of the data being submitted with the application ([Part 152.50](#)).
3. Identify the pesticide product (use product name and trade name(s), if different).
4. Identify physical, chemical, and technical properties of pesticide product.
5. Include product performance/application data (field of use; effects on harmful organisms; intended use; application rate; concentration of active ingredients; method of application; number/timing of application and duration of effectiveness; special instruction/precautions; and instructions for use).
6. Include additional information on use and handling of pesticide product.
7. Justification for the classification and labeling of the pesticide product.
8. Include required copies of the proposed label for the pesticide product.
9. Include efficacy data and related information (effectiveness and resistance).
10. Include a description of studies conducted, analytical methods used and results of the studies (see Part 158).
11. Include data on toxicological studies and exposure information; residues in or on treated products, food, or feed (if applicable); fate and behavior of pesticide product in the environment.

The registration process varies slightly for the following applications:

- Registration for alternate formulations (see [Part 152.43](#))
- Amendments to a previously approved registration (see [Part 152.44](#))
- Notification and non-notification changes to registration (see [Part 152.46](#))

IV. Procedure for Product Registration

A. Determining Whether FIFRA Requires Product Registration

Paints and other formulated products containing an antimicrobial designed to protect a substrate and with related label, product literature, or advertising claims require FIFRA registration as a pesticide. Paints and other formulated products treated with an antimicrobial to protect the dried coating itself, not intended for antimicrobial protection of a substrate, do not require registration as a pesticide. Such products fall under the “treated articles” exemption in the FIFRA. **An antimicrobial pesticide added to the paint or coating to impart protection is itself, however, a pesticide, and must be currently registered with EPA.**

In general, manufacturers must register individual formulations (not product lines). Manufacturers must carefully consider product formulation, use and accompanying statements made on labels, product literature and advertising when determining whether to register a product. The registration requirement applies to products intended to kill mildew organisms and products intended to kill or prevent mold in food-processing plants. Such products are considered pesticides [40 CFR 152.15]. Some examples of such products that are subject to FIFRA registration are:

- Anti-fouling paints and coatings for boat bottoms and underwater structures
- Wood preservatives
- Rot preservatives
- Food or beverage plant interior enamels, mildew resistant
- Anti-mildew paint additives

“Treated articles” are exempt from the FIFRA registration requirements, when treated with a registered antimicrobial. Treated articles (or substances) are defined as:

An article or substance treated with, or containing, a pesticide to protect the article or substance itself (for example, paint treated with a pesticide to protect the paint coating, or wood products treated to protect the wood against insect or fungus infestation), if the pesticide is registered for such use. [40 CFR 152.25(a)].

Generally, public health claims — either explicit or implicit — that express protection beyond the treated article or substance itself will render a product ineligible for the treated articles exemption.

In other words, a manufacturer of paints or formulated products containing an antimicrobial pesticide does not need to register the product as a pesticide where:

1. The manufacturer treats the product with a pesticide, for the purpose of protecting the paint or other product from bacteria or other contamination, and
2. The product’s label and accompanying literature does not include statements about the pesticidal benefit of using the product, excluding statements related to pesticides added for protection of the product.

B. Procedures for Obtaining a FIFRA Registration

To register a pesticide, an applicant must demonstrate that the pesticide satisfies the statutory standard for approval. That standard requires, among other things, that the pesticide perform its intended function without causing “unreasonable” adverse effects on the environment [7 USC 136a(c)(5)(B)].

The term “unreasonable adverse effects on the environment” is defined as:

“any unreasonable risk to man or to the environment, taking into account the economical, social and environmental costs and benefits of the use of any pesticide” [7 USC 136(bb)].

EPA has interpreted this section to require a finding that the benefits of each use of the pesticide exceed the risks of use when the pesticide is used in compliance with the terms and conditions of registration or in accordance with commonly recognized practices.

For EPA to perform the risk/benefit analysis mandated under FIFRA, the agency must have sufficient data and information on a pesticide product. All applications for registration, re-registration or amended registration as covered under Section 3(c)(1)(D) of the act must include or cite data in support of such applications.

C. Application Procedures for Pesticide Registrations

EPA divides pesticide applications into three general categories: new chemical, new use and identical/substantially similar.

1. A “new chemical” application is for registration of a product containing a new pesticide that is not currently registered with EPA. The original Application for Pesticide Registration ([EPA Form 8570-1](#)) must be completed and submitted with each application for registration. EPA stipulates details at [40 CFR 152.50](#).
2. A “new use” application is for an active ingredient or formulation type that is not currently included in directions for use of any product that contains such an active ingredient or formulation type. New uses are defined in [40 CFR 152.3\(p\)](#).
3. An “identical/substantially similar” application is for registration of a pesticide product that is substantially similar or identical in its uses and formulation to products that are currently registered with EPA. In some cases, these applications are eligible for expedited review under 3(c)(3)(b) of FIFRA.

The three application procedures outlined above require use of [EPA Form 8570-1](#). The applicant must also submit a Confidential Statement of Formula ([EPA Form 8570-4](#)). [Instructions related to submitting](#) forms are available on EPA’s website. Applicants are advised not to fax or email forms containing confidential or sensitive information.

D. Data Submission Requirements

Applicants must include three copies of all applicable supporting data. This data submission must be formatted in accordance with the requirements set forth in [40 CFR Part 158](#) and [PR Notice 2011-3](#). Data requirements include such things as detailed specific chemistry data (particularly in “identical/substantially similar” applications), acute toxicity data (where the product is not substantially similar or identical to another registered product). Applicants/formulators who purchase and use an EPA registered product from another producer may be exempt from certain data submission requirements concerning safety of that ingredient. Such applicants may submit a Formulator’s Exemption Statement ([EPA Form 8570-27](#)).

Additionally, if the active ingredient used to formulate the product is not registered, applicants must provide chemistry data on the technical grade of the active ingredient as well as on the formulated product. Efficacy data is required for products designed to control pests of public health significance (such as rats, roaches, viruses, bacteria, etc.), and may be required on a case by case basis for other applications. In some limited circumstances, (e.g., an industry or NIOSH study might be used in lieu of specific inhalation toxicity data), EPA will waive data requirements (applicants who believe that a waiver is feasible should discuss that possibility with the appropriate EPA product manager).

E. Amended Applications

Certain modifications of a registered product’s composition, labeling or packaging make it subject to amended application requirements. Manufacturers must obtain prior approval from EPA by using [EPA Form 8570-1](#) for proposed alterations. Generally, amendments are characterized as either a “identical/substantially similar” amendment or a “new use” amendment. Refer to [40 CFR 152.50](#) for details. on the information required in applications for amended registration

Some modifications to a registered product may not require a formal application and agency approval; however, EPA must be notified of these changes [[40 CFR 152.46\(a\)](#)]. These changes include labeling revisions concerning such things as brand name changes, bilingual labeling, warranty changes, etc., or certain limited product chemistry changes. The notification procedure also requires use of [EPA Form 8570-1](#).

F. Data Compensation Requirements

In complying with the extensive data submission requirements under FIFRA, some applicants submit data that is developed and submitted to the agency in support of another person’s application for registration. Applicants who use such secondary data may be required to comply with the data compensation requirements of FIFRA Section 3(c)(1)(F).

EPA provides details related to data compensation in [Chapter 10 of the Pesticides Registration Manual](#).

V. Standard Treated Article Labeling Claims for Paints and Other Formulated Coatings

EPA’s [Pesticide Registration Notice 2000-1](#), titled *Applicability of the Treated Articles Exemption to Antimicrobial pesticides*, provides guidance about the scope of the treated articles exemption, specified at [40 CFR 152.25\(a\)](#). In this notice, EPA provides examples of labeling claims eligible for the treated articles exemption. Generally, public health claims, either explicit or implicit, that express protection beyond the treated article or substance itself will render a product ineligible for the treated articles exemption. In addition, EPA regards trademarked product names of treated articles or substances and a product’s packaging and advertising literature as potential sources of public health claims that would render the product ineligible for the exemption. EPA encourages requests for written opinions regarding antimicrobial claims when there is a question about exemption applicability.

False or misleading claims or comparison may not be used on the label. Also disallowed are other claims such as “safe,” “nonpoisonous,” “harmless,” etc., or claims such as “pollution approved” and “all natural ingredients” [[40 CFR 156.10\(a\)\(5\)](#)]. Furthermore, EPA does not allow antimicrobial claims that are part of the name of the product or not properly qualified as to their intended non-public health use. All references to the pesticidal properties and the required qualifying statements should be located together, printed in same size, color, and style of type, and given equal prominence to each other as well as any other described feature of the product.

VI. Assignment of Registration to Private Labeler or Distributor

EPA permits a private labeler or distributor to market a pesticide product under that company's own brand name, provided an application for supplemental registration is submitted [[40 CFR 152.132](#)]. Such registration and sale are called "supplemental distribution."

The application may be submitted by the manufacturer/registrant of the previously registered product or by an applicant for new or amended registration (such as the private labeler or distributor). No application for supplemental registration will be approved until the application for new registration has been approved.

EPA specifies that applicants for supplemental registration must provide the agency with certain information (using [EPA Form 8570 5](#)). These required notification elements include:

1. The name and address of the basic registrant and the registration number of the registered product.
2. The name and address of the distributor, the distributor's company number (if desired, EPA will assign a name upon written request), and the name to be used on the product to be distributed.
3. There are also specific requirements concerning packaging and labeling with which the distributor must be familiar.

VII. State Registration Requirements

The states (except for Alaska) also register pesticides to meet special local needs, as allowed by EPA regulation at [40 CFR Part 162](#). Most will accept products that are EPA registered without further requirements. All charge fees and all require periodic renewal, some on an annual basis.

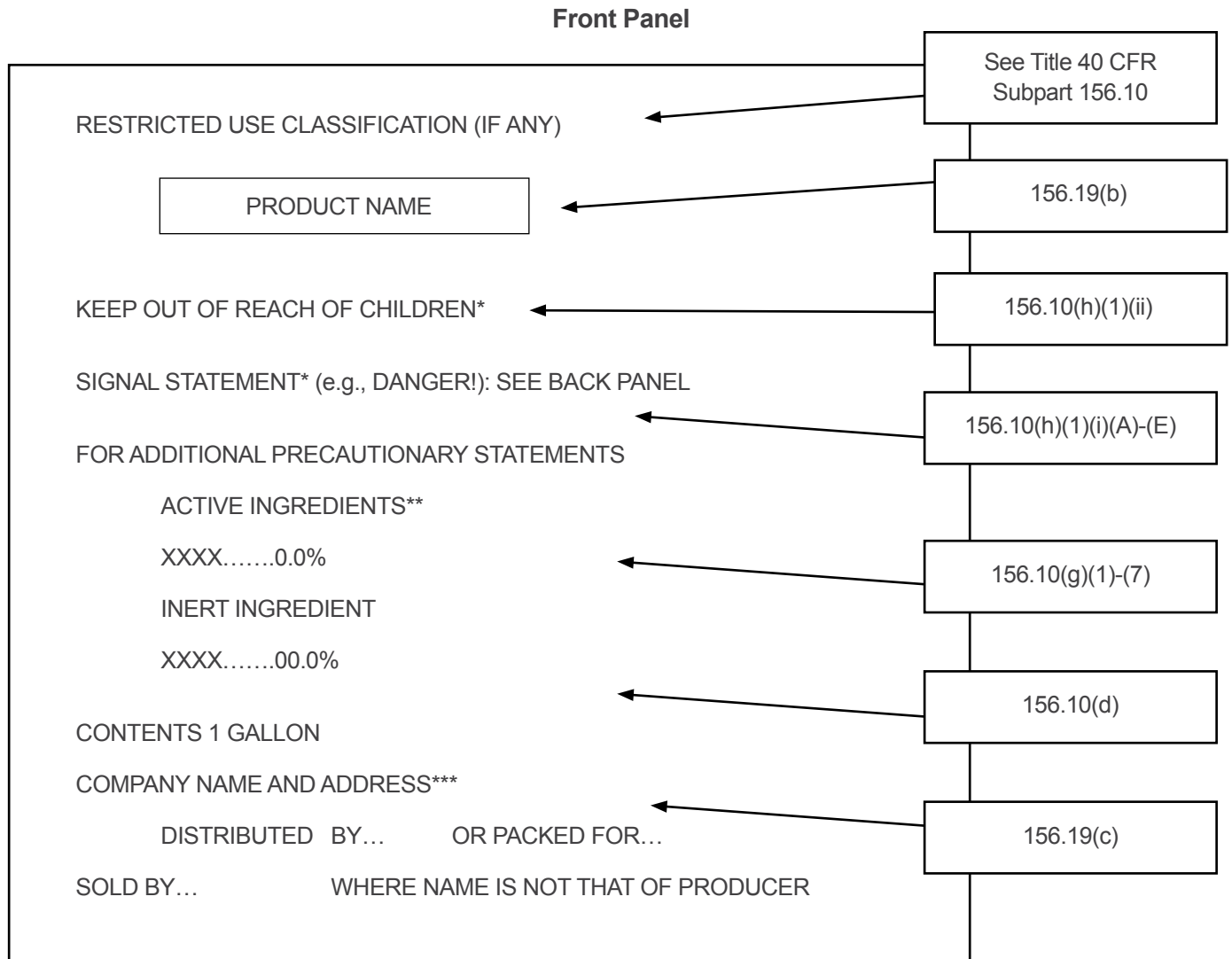
Applicants should note that the state agencies handling pesticide registrations and the primary pesticide control official in each state are listed in the official publication of the [Association of American Pesticide Control Officials](#).

Information about the Association of American Pesticide Control Officials (AAPCO) is available on the [AAPCO website](#).

AAPCO also maintains a [list of official publications](#), with each document accessible online.

EPA Prototype Sales Label

[See 40 CFR 156.10]



*Required front panel placement

**Waiver may be obtained for back panel placement

***Front or back panel placement

NOTE: Consult 40 CFR 156.10(a)(2) for prominence and legibility requirements.
Signal statement is determined by toxicity categories [40 CFR 156.10(h)]

Back Panel

Directions for Use:

It is a violation of Federal Law to use this Product in a manner inconsistent with its labeling

Consult 156.10(i) for specific instruction for directions for use.

Precautionary Statements

[Repeat Signal Statement]

Hazard to Humans and Domestic Animals

[156.10(h)(2)(i)]

Practical Treatment

[156.10(h)(1)(iii)]

Environmental Hazards

[156.10(h)(2)(ii)]

Physical and Chemical Hazard

[156.10(h)(2)(iii)]

Storage and Disposal

[Consult Storage and Disposal Notice, PR-83-3]

NOTE: Consult 40 CFR 156.10(a)(2) for prominence and legibility requirements. Signal statement is determined by toxicity categories. [40 CFR 156.10(h)]

CHAPTER 9 – COMMERCIAL AND SHIPPING LABELING

- I. Labeling for Toll-Produced and Private-Labeled Products.....2
- II. Warranties 2
- III. Waste Disposal Labeling Guidelines 2**
 - 1. General Disposal Statements 2
 - 2. Paint Disposal Statements 2
 - 3. Latex Paint.....3
 - 4. Solvent or Oil-Based Paint 3
 - 5. Aerosol Paint 3
- IV. Weights and Measures Labeling 3
 - 1. General.....3
 - A. Federal 3
 - B. State 4
 - 2. Labeling Guidance.....4
- V. ACA Sample Labels for Tint Base Paints.....6
 - 1. Sample Label 1 for Tint Base Paints 6
 - 2. Sample Label 2 for Tint Base Paints 7
 - 3. Dual-Quantity Content Statement.....8
- VI. Shipping, Marking and Labeling Requirements 9
 - 1. Marking.....9
 - A. General Information.....9
 - 2. Specific Markings for Non Bulk Packagings
(refer to 49 CFR 172.301) 10
 - 3. Specific Markings for Bulk Packagings
(refer to 49 CFR 172.302) 10
 - 4. U.S. Customs Country of Origin Marking 11
 - 5. Labeling 11
 - A. General Information..... 11
 - B. Determining the Requisite Labeling for
Paint and Coatings Specifically 12

I. Labeling for Toll-Produced and Private-Labeled Products

The [Federal Hazardous Substances Act \(FHSA\)](#) makes it a criminal act to introduce or deliver for introduction into interstate commerce “any misbranded hazardous substance or banned hazardous substance.”

[FHSA Section 4(a), 15 USC 1263]. This responsibility applies to packagers. Packagers should confirm that cautionary labeling on the products they package is correct, regardless of who drafted it, and whether or not their name appears on the label. The FHSA requires only that the name and place of business of the manufacturer, packer, distributor, or seller appear on the label. Thus, the actual manufacturer’s name may not even appear anywhere on the packaging. Since introduction or causing thereof of a misbranded hazardous substance is a prohibited act, the label distributor may share in the responsibility for a violation. A manufacturer may also be held responsible if it introduced the misbranded or banned hazardous substance into interstate commerce. Considering packager and manufacturer responsibility, toll manufacturers may consider labeling products with clear representations of parties involved and their assigned responsibilities.

II. Warranties

Written warranties related to a product are strictly regulated under the federal [Magnuson-Moss Act](#) and related regulations at [16 CFR Part 700-703 \(Subchapter G\)](#), implemented by the Federal Trade Commission. Covered warranties are not limited to statements made on a product label.

FTC regulations cover the following areas:

- Covered products and scope generally – [16 CFR Part 700](#)
- Disclosure of written consumer product warranty terms and conditions – [16 CFR Part 701](#)
- Pre-sale availability of written warranty terms – [16 CFR Part 702](#)
- Informal dispute settlement procedures – [16 CFR Part 703](#)

III. Waste Disposal Labeling Guidelines

1. General Disposal Statements

For industrial-use products and related packaging, disposal of waste may be subject to regulations promulgated under the federal Resource Conservation and Recovery Act (RCRA) and any analogous state regulations. In the interest of product stewardship and because of the diversity of the potential regulatory requirements governing disposal of waste, the ACA suggested labeling statement for disposal guidance is as follows:

For disposal guidance of unused amount, contact your local or state government environmental regulatory agency.

Household paint products that are to be disposed of by consumers are not regulated as hazardous wastes except in California. As with industrial products, disposal labeling for household (consumer) paints is not required by law; however, manufacturers may want to incorporate the general statement above or consider, as an alternative, the following labeling guidance on consumer paints.

2. Paint Disposal Statements

Instructions: The following are considerations for including information about disposal of paint products on the product label:

- **Placement** — While placement of the disposal information is not currently mandated by any state or federal law, paint manufacturers may consider including disposal instructions immediately after the “use,” “storage,” or “clean-up” instructions. However, care needs to be taken to ensure that the placement of these instructions is compatible with the precautionary labeling requirements.
- **Prominence** — While the prominence of the disposal information is not currently mandated by any state or federal law, paint manufacturers may consider giving disposal instructions the same prominence as the “use,” “storage,” or “clean-up” instructions.

3. Latex Paint

Leftover latex paint generated by consumers is considered non-hazardous waste in most states. (**Note:** *Latex paint offered for disposal in California is considered hazardous waste, necessitating a consideration of the solvent or oil based statement in lieu of the latex disposal statement.*) As a result, product labels on latex paints may address consumer disposal as follows:

Environmental Tip: Give remaining paint to your neighbor, religious institution, school, or other community organizations.

Partially Full: Pour residue into absorbent material. When dry, dispose the dried absorbent mixture with normal trash; or save for a household hazardous waste paint collection program.

Empty: This container is recyclable in a recycling program.

4. Solvent or Oil-Based Paint

Solvent or oil based paint is not a RCRA hazardous waste if generated by consumers. However, it is considered a household hazardous waste by most state and local waste management agencies. As a result, product labels on solvent or oil based paints may address consumer disposal as follows:

Environmental Tip: Give remaining paint to your neighbor, religious institution, school, or other community organizations.

Partially Full: Pour residue into absorbent material and dispose of according to federal, state, or local regulations; or save for a household hazardous waste paint collection program.

Empty: This container is recyclable in a recycling program.

5. Aerosol Paint

Aerosol paint (in spray cans) is not a RCRA hazardous waste if generated by consumers. However, it is considered a household hazardous waste by most state and local waste management agencies. As a result, product labels may address consumer disposal as follows:

Environmental Tip: Give remaining paint to your neighbor, church, school, or other community organizations.

Partially Full: Save for a household hazardous waste paint collection program.

Empty: This container is recyclable in a recycling program that accepts aerosol cans.

IV. Weights and Measures Labeling

1. General

a. Federal

The principal federal legislation governing “weights and measures” labeling is the [Fair Packaging and Labeling Act \(FPLA\) \(15 USC 1453 et seq.\)](#). However, subsequent to its enactment, the Federal Trade Commission (FTC) ruled (on August 5, 1969) that “paints and kindred products” were outside the scope of the definition of “consumer commodity” contained in the FPLA, and therefore these products were not subject to requirements of the Act. In issuing this *General Statement of Policy or Interpretation*, the FTC declared that “...the legislative history of the Act demonstrates the intent of Congress, for the reasons stated therein, to place certain categories (subject to regulation by FTC) outside the scope of the definition of ‘consumer commodity’ in the Act.” The FTC interpretation is codified in [16 CFR Part 503.5](#). At [16 CFR Part 503.2](#), FTC further explains that “adhesives and sealants” are “consumer commodities” covered by the act, whereas it does not consider “inks” a “consumer commodity.”

Products under the “kindred” classification include paint and paint thinners, paint brushes, aerosol paints, underbody coatings, putty, caulking and glazing compounds and allied products (refer to [NAICS Standard Industrial Classification No. 2851](#)).

Notwithstanding this action by the FTC, state and local governments require paint and coatings products comply with state and local weights and measures labeling laws. Fortunately, most states have followed model standards adopted by the National Conference on Weights and Measures, namely the *Uniform State Weights and Measures Law* and the *Uniform State Packaging and Labeling Regulation*. Since 1993, revisions to labeling requirements of this law have mirrored those of the FPLA. The following discussion of weights and measures labeling requirements is based on the *Uniform State Weights and Measures Law* and the *Uniform State Packaging and Labeling Requirements*.

Additional information is available on the website of the [National Institute of Standards and Technology, Office of Weights and Measures](https://www.nist.gov/pml/weights-and-measures) at: <https://www.nist.gov/pml/weights-and-measures>.

b. State

The *Uniform State Weights and Measures Law* and the *Uniform State Packaging and Labeling Regulation* were developed and adopted by the National Conference on Weights and Measures, which is convened annually to provide a forum for state weights and measures officials to discuss matters of mutual interest. The National Conference on Weights and Measures is sponsored by the National Bureau of Standards under its duties to provide “cooperation with the States in securing uniformity in weights and measures laws and methods of inspection.”

The uniform standards are not binding on the states, unless adopted or referenced by state law, as is often the case. Through the National Conference on Weights and Measures, state weights and measures officials have an opportunity to participate in the development of regulations. Modifications recommended by the several committees of the conference are presented and often approved by state delegates at the national conference. Since state officials are in general agreement with the provisions of these two publications, most state weights and measures laws are patterned closely thereafter.

2. Labeling Guidance

As previously discussed, there is no single federal law controlling the weights and measures labeling of the coatings industry’s products. Therefore, the best guidance for the industry in these matters is contained in the *Uniform State Weights and Measures law*, the *Uniform State Packaging and Labeling Regulation*, and related publications. The most relevant sections of the [Uniform State Packaging and Labeling Regulation](#) are listed below.

Section 5. Declaration of Responsibility: Consumer and Nonconsumer Packages

Section 6. Declaration of Quantity: Consumer Packages

- 6.1 General
- 6.2 Largest Whole Unit
- 6.3 Net Quantity
 - » 6.3.1 Use of “Net Weight”
 - » 6.3.2 Lines of Print or Type
- 6.4 Terms: Weight, Liquid Measure, Dry Measure, or Count
 - » 6.4.1 Combination Declaration
- 6.5 SI Units: Mass, Measure
 - » 6.5.1. Symbols
 - » 6.5.2. Fractions and Prefixes
- 6.6. Prescribed Units, SI
 - » 6.6.1 Less than 1 Meter, 1 Square Meter, 1 Kilogram, 1 Cubic Meter, or 1 Liter
 - » 6.6.2 One Meter, 1 Square Meter, 1 Kilogram, 1 Liter, 1 Cubic Meter, or More

- 6.7 Inch pound System: Weight, Measure
 - » 6.7.1. Symbols and Abbreviations
 - » 6.7.2 Units of Two or More Meanings
- 6.8 Prescribed Units, Inch-pound system
 - » 6.8.1. Less than 1 foot, 1 square foot, 1 pound, or 1 pint
- 6.11 Fractions
- 6.12 Supplementary Quantity Declarations
- 6.13 Rounding
- 6.14 Qualification of Declaration Prohibited
- 6.15 Character of Declaration: Average
- 6.16 Random Packages

Section 7. Declaration of Quantity: Non-consumer Packages

- 7.1. General
- 7.2. Location
- 7.3. Terms: Weight, Liquid Measure, Dry Measure or Count
- 7.4. SI Units: Mass, Measure
 - » 7.4.1. Symbols
- 7.5. Inch-Pound Units: Weight, Measure
 - » 7.5.1 Symbols and Abbreviations
- 7.6. Character of Declaration: Average

Section 8. Prominence and Placement: Consumer Packages

- 8.1 General
 - » 8.1.1 Location
 - » 8.1.2 Style of Type or Lettering
 - » 8.1.3 Color Contrast
 - » 8.1.4 Free Area
 - » 8.1.5 Parallel Quantity Declaration
- 8.2 Calculation of Area of Principal Display Panel for Purposes of Type Size
 - » 8.2.1 Minimum Height of Numbers and Letters

Section 9. Prominence and Placement: Non-consumer Packages

- 9.1. General

Section 10. Requirements: Specific Consumer Commodities, Non-consumer Commodities, Packages, Containers

- 10.3 Aerosols and Similar Pressurized Containers
- 10.7 Cylindrical Containers

Section 11. Exemptions

- 11.16 Small Packages
- 11.23 Tint Base Paint

NOTE: To assist in interpreting the provisions of section 11.23 above, review the ACA Sample Labels which follow in the next section.

Section 12. Variations to be Allowed

- 12.1 Packaging Variations
 - » 12.1.1 Variations from Declared Net Quantity

V. ACA SAMPLE LABELS FOR TINT BASE PAINTS

Section 11.23 of the [Model State Packaging and Labeling Regulation](#) permits alternate methods for labeling the quantity of tint base paints, depending on the tinting system used.

1. Sample Label 1 for Tint Base Paints

Tint base paints normally must be labeled to show actual content. Under certain circumstances, discussed in Sample Label 2, another method may be used.

Recommended Labeling:

(Principal Display Panel)

[CONTAINS] _____ fl oz (or _____ qt or _____ gal) / _____ l

(Back Panel — Optional Statement)

This container is functionally slack filled for the addition of colorant at point of sale. This product is not to be sold without the addition of a colorant.

2. Sample Label 2 for Tint Base Paints

Some tint base paints may be labeled as follows if certain preconditions are met, and where the tint base system:

1. Includes definite foreknowledge of how much tint is to be added,
2. Includes an absolute guarantee that the quantity received by the customer is as stated on the label,
3. Provides on the label that tint bases are not intended to be sold without colorant added, and
4. Also bears on the label a content statement reflecting the amount of tint base contained therein.

Recommended Labeling:

(Principal Display Panel)

[CONTAINS] _____ **CANNOT BE SOLD WITHOUT ADDITION

OF COLORANT

(Back Panel)

Before addition of colorant, the contents are _____ *fl oz/ _____ *l; after colorant is added, the contents are _____ ***.

[] Bracketed words are optional.

* Insert number of fluid ounces or liters.

** Dual quantity content statement (SI Metric and Inch Pound) is required.

*** Insert One Quart or One Gallon, One Liter as appropriate.

NOTE: The statement of contents, shown under the principal display panel above, must be placed in the bottom 30 percent.

3. Dual Quantity Content Statement

Section 6.6.4 of the [Model State Packaging and Labeling Regulation](#) requires a dual quantity content statement when the Sample Label 1 model is used for labeling the content of tint base paints. Where the number of fluid ounces can be reduced to “common fractions” in terms of quarts, the parenthetical content statement may be expressed in such terms. “Common fractions” are defined as “halves, quarters, eighths, sixteenths, or thirty seconds” (Section 6.11). As a guide, the parenthetical dual quantity content statement that should accompany a given number of fluid ounces is as follows:

Fluid Ounces	Parenthetical Content Statement
28	1 $\frac{3}{4}$ Pts.
29	1 $\frac{13}{16}$ Pts.
30	1 $\frac{7}{8}$ Pts.
31	1 $\frac{15}{16}$ Pts.
***	***
118	3 $\frac{11}{16}$ Qts.
119	3 $\frac{23}{32}$ Qts.
120	3 $\frac{3}{4}$ Qts.
121	3 $\frac{25}{32}$ Qts.
122	3 $\frac{13}{16}$ Qts.
123	3 $\frac{27}{32}$ Qts.
124	3 $\frac{7}{8}$ Qts.
125	3 $\frac{29}{32}$ Qts.
126	3 $\frac{15}{16}$ Qts.
127	3 $\frac{31}{32}$ Qts.

VI. Shipping, Marking and Labeling Requirements

1. Marking

a. General Information

- A. The federal regulations governing marking are contained in [49 CFR Part 172, Subpart D](#), more specifically, in Parts 172.300 through 172.338 (*Due to space constraints, these regulations are not reprinted as part of this guide.*) Specific details are also provided in the “Marking and Labeling Module” of ACA’s [Guide to Training Hazardous Materials Employees Involved in Transportation](#) (ACA member login required), available online at: https://www.paint.org/wp-content/uploads/dlm_uploads/2019/12/Transport-Training-Guide.pdf

Additional information is also available on website of the Department of Transportation’s web site: <http://hazmat.dot.gov>.

- B. “Marking” is broadly defined as the “descriptive name, identification number, instructions, cautions, weight, specification, or UN marks, or combination thereof,” required on outer packagings (*refer to 49 CFR 171.8*).
- C. 49 CFR 172.300 requires that “every person” who offers hazardous materials for transportation must mark each package, freight container and transport vehicle in the manner required by Subpart D.
- D. All required markings must be (*refer to 49 CFR 172.304*):
1. In English;
 2. Durable;
 3. Printed on or affixed to the package surface or on a label, tag, or sign;
 4. Displayed on a background of “sharply contrasting color”;
 5. Unobscured by other labels or attachments; and
 6. Located away from advertising and other markings that could “substantially reduce its effectiveness.”
- E. The use of abbreviations in a proper shipping name is prohibited, with two exceptions (*refer to 49 CFR 172.308*)(*refer to 49 CFR 172.308*):
1. “Other Regulated Material” may be abbreviated as “ORM”;
 2. When an abbreviation appears in Column 2 of the 49 CFR 172.101 table, it may be used.
- F. Marking of the proper shipping name or identification number of a hazardous material on a package is prohibited, unless that package contains the hazardous material so identified or its residue. This prohibition, however, does not apply in three situations of relevancy to paint and coatings manufacturers (*refer to 49 CFR 172.303*).
- G. Separate marking requirements are prescribed for non bulk packagings (capacity < 119 gallons for liquids, < 882 pounds for solids, and < 1000 pounds for gases) and for bulk packagings (capacity > 119 gallons for liquids, > 882 pounds for solids, and > 1000 pounds for gases). For the general marking requirements for non bulk packagings refer to 49 CFR 172.301 (described in general in Section II), for bulk packagings, refer to 49 CFR 172.302 (described in general in Section III).
- H. Under the conditions specified, materials may be transported in the United States when shipped in accordance with the regulations under the International Civil Aviation Organization (ICAO) and the International Maritime Organization (IMO) (*refer to 49 CFR 171.11 and 171.12*).

2. Specific Markings for Non-Bulk Packagings (refer to 49 CFR 172.301)

- A. *Mandatory:* Before it can legally be offered for transport, a non-bulk packaging must at a minimum display the following two items of information:
1. The proper shipping name of the material being shipped (obtained from Column 2 of the 49 CFR 172.101 table); and
 2. The material's identification number preceded either by "UN" or "NA" (both obtained from Column 4 of the 49 CFR 172.101 table). An exemption from the marking of the identification number is provided in the case of "limited quantities" and ORM D materials (*refer to 49 CFR 172.301(f)*).
- B. *As Appropriate:*
1. Technical Names — In addition, when the proper shipping name of the material being shipped would include a "n.o.s." or other generic description, e.g., "flammable liquids, n.o.s.," the marking on the non-bulk packaging must also include the technical name of the material. Refer to 49 CFR 172.203(k) for further details on technical names. Refer to 49 CFR 172.301(b) for further details on the marking requirements for technical names; and refer to 49 CFR 172.301(f) for details on the exemption from this marking requirement.
 2. Exemption Packagings — "DOT E" followed by the exemption number assigned must be marked on the outside of the packaging when that packaging has been authorized by an exemption (refer to 49 CFR 172.301(c)).
 3. Consignee's or Consignor's name and address, except when the packaging is:
 - a. Transported by highway only and will not be transferred from one motor carrier to another; or
 - b. Part of a carload lot, truckload lot or freight container load, and the entire contents of the rail car, truck or freight container are shipped from one consignor to one consignee. (49 CFR 172.301(d)).
- C. Liquid Hazardous Materials — Specific marking requirements for the transport of non-bulk shipments of hazardous liquids are provided in 49 CFR 172.312. Among these is the requirement that each non-bulk combination package must be legibly marked with orientation arrows pointing to the correct upright direction. For additional details on specification of this marking and applicable exceptions, refer to 49 CFR 172.312.
- D. ORM D Shipments — Specific marking requirements are prescribed for the shipment of ORM D materials (*refer to 49 CFR 172.316*).
- E. "Poisonous" Materials — Specific marking requirements are prescribed for the shipment of poisonous materials (*refer to 49 CFR 172.313*).
- F. "Hazardous Substances" — Specific marking requirements are prescribed for the shipment of hazardous substances in non-bulk packagings (*refer to 49 CFR 172.324*).

3. Specific Markings for Bulk Packagings (refer to 49 CFR 172.302)

- A. *Mandatory:* Before it can legally be offered for transport, a bulk packaging must at a minimum be marked with the identification number of the material being transported (refer to 49 CFR 172.302(a) and 172.332).
- B. *As Appropriate:*
1. Exemption Packagings — "DOT E" followed by the exemption number assigned must be marked on the outside of the packaging when an exemption is authorized (*refer to 49 CFR 172.302(c)*).
 2. Residues and vapors (*refer to 49 CFR 172.301(d)*).
 3. Portable tanks, cargo tanks, tank cars, multi unit tank cars, and other bulk packagings — consult 49 CFR 172.326, 172.328, 172.330, and 172.331, respectively.

4. U.S. Customs Country of Origin Marking

U.S. Customs marking requirements are contained in [19 CFR 134](#) (*Due to space constraints, these regulations are not reprinted as part of this guide.*)

U.S. Customs requires that every article of foreign origin (or its container) imported into the United States be marked in a conspicuous place as legibly, indelibly, and permanently as the nature of the article (or container) will permit, in such manner as to indicate to an ultimate purchaser in the United States the English name of the country of origin of the article, at the time of importation into the Customs territory of the United States (refer to [19 CFR 134.11](#)).

5. Labeling

General Information

- A. The regulations governing labeling for shipments are contained in [49 CFR Part 172, Subpart E](#), more specifically, in Parts 172.400 through 172.450.
- B. A “label” is a form of marking that is required to be used on certain types of packagings to identify hazard characteristics of the material being transported, e.g., “flammable liquid.” The regulations are specific to the label’s size, color, and shape (*refer to 49 CFR 172.407*).
- C. Labeling is required for both a material’s primary hazard and for any subsidiary hazard. For subsidiary hazards refer to 49 CFR 172.402.
- D. The appropriate hazard class, or division number in the case of Division 5.1 (oxidizers) or 5.2 (organic peroxides), must be displayed on the label for the primary hazard, but is prohibited on subsidiary labels (*refer to 49 CFR 172.402*). Note that there are no divisions within Class 3 (flammable and combustible liquids).
- E. A label is required for each hazard class in the case of materials in mixed packagings or materials being shipped in consolidated packagings (*refer to 49 CFR 172.404*).
- F. 49 CFR 172.400 identifies the specific types of packagings for which labeling is required. For example, a label is required for all non bulk packages, but only some bulk packages.
- G. When the use of a label is required, it will be so noted, and the specific label (or labels in the case of a material having both a primary and subsidiary hazard) for that particular material will be indicated by Column 6 of the 49 CFR 172.101 table, and the table provided under Part 172.400; also, refer to Part 172.402 regarding subsidiary hazards.
- H. Details on the placement of labels and general label specifications are provided by 49 CFR 172.406 and 172.407, respectively. As a general rule, labels must be placed on the same surface and near the proper shipping name marking on the packaging.
- I. For details on design specifications for each specific label that may be required (e.g., “flammable liquid,” “corrosive,” “empty”), refer to 49 CFR 172.411 through 172.450.

Determining the Requisite Labeling — For Paint and Coatings Specifically

- A. Using the table for paint and the information provided in 49 CFR 172.101, you should undertake the following step by step analysis to determine the labeling to use:
- B. **EXAMPLE:** If, after characterization of the material the following is chosen as the shipping name:

Paint including paint, *lacquer, enamel, stain, shellac solutions, varnish, polish, liquid filler, and liquid lacquer base*, **Class 3, UN1263**

Step 1. Determine your material's packaging and refer to 49 CFR 172.400. Remember that Part 172.400 specifies the types of packagings for which labeling is required. As a general rule, labels are required for all non bulk packagings.

Once you determine that the packaging type you intend to use requires labeling, refer to Column 6 of the 49 CFR 172.101 table to determine the proper label to use. Column 6 indicates that materials meeting this proper shipping description should be labeled "flammable liquid."

Step 2. Determine whether your shipment qualifies for a labeling exception.

- a. This is done by looking in column 8A of the "Hazardous Materials Table" in 49 CFR 172.101, or by referring to 49 CFR 172.400a, which identifies several conditions for which an exception from labeling is authorized. For example, Part 172.400a(b) advises that, under certain conditions, materials shipped in "small quantities" and in "limited quantities" may be excepted from labeling under the applicable section in Part 173; in this case, for further details refer to Part 173.4 (for small quantities) and Part 173.150 (for Class 3 flammable and combustible liquids).
- b. Determine whether your material can properly be reclassified. If your material can be reclassified "combustible" under 49 CFR 173.120(b)(2), it would be exempt from the labeling requirements.

Step 3. Determine whether the material has a subsidiary hazard (refer to column 6 of the "Hazardous Materials Table" in 49 CFR 172.101. Subsidiary hazards are listed after the primary hazard, separated by a comma.

- a. In this case, materials meeting this shipping description do not.
- b. Assume, however, for the sake of this example, that your material does have a subsidiary hazard. 49 CFR 172.402 will advise you under what circumstances you must label for the subsidiary hazard. For example, Part 172.402 advises that a label is not required for a flammable liquid with a subsidiary hazard that is being shipped as a Packing Group III material, but it is required when the material is being shipped as a Packing Group I or II material.

Step 4. Refer to 49 CFR 172.419, 172.406 and 172.407. These sections will provide you with the requisite details on, respectively, how a "flammable liquid" label should look, its proper placement on the packaging(s), and its required size and other physical design specifications. If your material presents a subsidiary hazard, you should refer to the applicable section for its description.

CHAPTER 10 – ADHESIVE, SEALANT AND REPAIR PRODUCTS

Introduction..... 2

Procedure for Use and Regulatory Requirements..... 2

Label Statements..... 3

 Flammable and Extremely Flammable Viscous Adhesive 3

 Hot-Melt Adhesive 3

Sample Labels..... 3

 Sample Label 1—Latex Caulk/Sealant..... 4

 Sample Label 2—Oxime-Based Silane Silicone Sealant 5

 Sample Label 3—Acetoxy-Based Silane Silicone Sealant 6

 Sample Label 4—Extremely Flammable/High
 Viscosity Cartridge Adhesive 7

 Sample Label 5—Hot-Melt Adhesive 8

 Sample Label 6—Plaster-Based Repair Products..... 9

 Sample Label 7—Dry/Ready-to-Use Repair Products 10

 Sample Label 8—Polyisocyanate Adhesive or Sealant..... 11

Labeling Requirements under VOC Content Regulations 12

ADHESIVE, SEALANT AND REPAIR PRODUCTS

Introduction

Adhesive, sealant and repair products are subject to labeling requirements that apply to the paint and coatings industry and formulated products in general. Labeling for adhesives, sealants and repair products may require some variations from standard practices for paints and coatings due to state/local regulations and industry trade practices that address unique properties, hazards and applications. This chapter only highlights those chemicals and properties that are unique to adhesive, sealant and repair products and should be used only to clarify and supplement the other chapters of this guide.

This chapter alone will not provide complete guidance for the labeling of these product types. Each manufacturer or marketer has the ultimate responsibility of conveying to the end user, a fair and adequate warning/notice as to the known hazardous properties associated with the handling, use and/or foreseeable misuse of their products.

This chapter addresses three main categories of products: adhesives, sealants and repair products (such as glazing, grout, mortar, joint compound, plaster of Paris, putty and spackle). Although these products are formulated using many of the same chemicals and possess many of the same hazard potentials as coatings, there are some distinctive differences. The following are characteristics unique to adhesive, sealant and repair products:

- **Delivery systems** – extrusion from a cartridge in bead form; troweled from a can over large surface area; atomized spray application.
- **Intended usage** – bonding of two substrates; as sealant or filler for windows, doors, bathroom or kitchen fixtures, cracks or holes in preparation for painting.
- **Packaging/containers** – primarily cartridges or tubes; cans with standard friction lids; plastic pails; heavy weight paper bags.
- **Physical consistency** – overall, a thicker consistency than that of paints/coatings; raw product is flexible/can be tooled; paste or powder form, etc.

Procedure for Use and Regulatory Requirements

Note: Please refer to Chapter 1 for a detailed description of the label development process.

After following the steps outlined in Chapter 1 and reviewing the basic label format, you may need to consider the supplemental information provided in this chapter to develop a precautionary label which reflects the potential hazards of the ingredient(s) in your caulk, sealant, adhesive and/or repair product(s). The label must then be modified to address hazards associated with use or foreseeable misuse of the finished product.

The final label may differ from one based solely on the hazards associated with the individual ingredients. Additional statements may be necessary to conform to industry practices and comply with federal, state, and local laws and regulations. Some statements may be deleted if conditions for use indicate that a potential hazard associated with a component is unlikely to manifest during use. The conventional labeling practices for industrial products (Chapter 2), consumer products (Chapter 3) and product-specific labeling considerations (Chapter 4) will assist in developing labels for adhesives, sealants and repair products. Other chapters of this guide also provide important information that will aid you in the label development process.

The federal regulations that address labeling for adhesives and sealants are listed below:

- A. [16 CFR Part 1302](#) – Ban of Extremely Flammable Contact Adhesives
- B. [16 CFR Part 1500.14, section 8](#) – The Labeling of Hazardous Art Materials Act, adopting ASTM D-426
- C. [16 CFR Part 1500.83\(a\)](#), paragraphs 10, 13, 34 and 37
- D. [40 CFR Part 59](#), National Volatile Organic Compound Emission Standards for Consumer Products
- E. [FTC Guidelines](#). ACA has also developed a related guidance document available on the [ACA Member Center website](#) under the section Regulatory Support Documents. The *ACA guidance document is called FTC Labeling Requirement for Health and Environmental Marketing Claims and Certifications*, covering VOC labeling requirements.

Another relevant resource is:

American National Standards Institute (ANSI) Z129.1-2000 – Hazardous Industrial Chemicals- Precautionary Labeling, available through the ANSI website at: <https://webstore.ansi.org/standards/acc/ansiz1292000>.

Regulations accommodate small packages of glues with a cyanoacrylate base that are too small to list all required information on the main label panel. Requirements are specified at [16 CFR Part 1500.83\(a\)\(37\)](#), also listed above. Glues with a cyanoacrylate base in packages of 3 grams or less are exempt from the requirement of 16 CFR 1500.121(d) that labeling permitted to appear elsewhere than on the main label panel must be in type size no smaller than 6-point type, provided the label complies with the following qualifying elements:

- The main display panel includes proper signal word and a statement of the principal hazard or hazards associated with this product.
- The main display panel includes a statement to carefully read additional warning included elsewhere and these warnings comply with requirements of 16 CFR 1500.121.
- The remainder of the cautionary labeling required by the act that is not on the main label panel must appear elsewhere on the label in legible type and must appear on any outer package, accompanying leaflet, display card or tag. Any additional cautionary labeling must comply with requirements of 16 CFR 1500.121(d).

Label Statements

Chapter 2, *Label Statements for Industrial Products*, Table 2, contains a list of common chemicals used to formulate products, as well as suggested or appropriate label statements for these chemicals. Chapter 4, *Product Specific Labeling Considerations*, offers detailed information on many product-specific considerations that may be applicable to adhesive, sealant and repair products. Some additional product specific considerations include:

1. Flammable and Extremely Flammable Viscous Adhesives

When conducting a hazard evaluation of a flammable or extremely flammable adhesive, it is important to consider the method of delivery in conjunction with flammability characteristics (i.e., flash point and boiling point). For example, the two most common delivery methods for this type of product are 1) from a cartridge or tube in a bead form; or 2) from a conventional container (i.e., standard friction lid steel can) and troweled over a large area.

The risks associated with vapor generation (i.e., inhalation and explosion/fire potential) may be dependent upon method of application. The basic concept behind this difference in actual risk relates to the surface area of adhesive exposed for solvent evaporation. Therefore, it may be important, when conducting the hazard evaluation, to measure vapor concentration in order to characterize and warn of potential hazards.

2. Hot-Melt Adhesive

Hot-melt adhesives deserve special attention because they are unique in their chemistry, method of application and hazards. A hot-melt adhesive is a resinous adhesive which achieves a solid state and resultant strength by cooling, whereas other adhesives may achieve the same results through evaporation or removal of the solvents. A hot-melt adhesive is extruded using a special applicator that heats the solid material to a temperature in the range of 350-400°F, thus converting the material to a fluid state. The hazards of hot-melt adhesives are a combination of physical hazards and health hazards. The physical hazard is the molten material that will cause physical burns. The health hazard is possible irritation to eyes and respiratory system due to the release of decomposition products given off during the heating process.

Sample Labels

Included here are several sample labels of products discussed in this supplement for which unique labeling characteristics exist. These sample labels are intended to be examples only. For complete label development on a specific product, federal, state and municipal laws, regulations and ordinances may require additional statements. International requirements should also be considered where appropriate (see Chapter 6). These sample labels are product specific and were created using the information in Tables 1 through 5 in Chapter 2, as well as the supplemental information in this chapter.

Sample Label 1 – Latex Caulk/Sealant

For latex caulking/sealant products regardless of viscosity, containing **less than** 10 percent ethylene glycol or diethylene glycol and no harmful amounts of other hazardous ingredients.¹ If the product to be labeled has ingredients that contribute hazards either other than or in addition to those shown, label statements to cover those hazards must be added to, or substituted for, the statements shown on this label.

For a two-panel label, split here and add: "Read carefully other cautions on the back/side panel."
[16 CFR 1500.121(a)(3)]

CAUTION!

Contains: (names of specific ingredients that contribute to the product's hazard.)²

KEEP OUT OF REACH OF CHILDREN.

Company name and address

¹ If ethylene glycol concentration is 10 percent or greater, refer to Table 1 for required statements.

² Remove this statement if the product does not contain any hazardous ingredients.

Sample Label 2 – Oxime-Based Silane Silicone Sealant

For silicone sealant products with health effects from **oxime silanes**. If the product to be labeled has ingredients that contribute hazards either other than or in addition to those shown, label statements to cover those hazards must be added to, or substituted for, the statements shown on this label.

For a two-panel label, split here
and add: "Read carefully other
cautions on the back/side panel."
[16 CFR 1 500.121(a)(3)]

WARNING!

MAY CAUSE ALLERGIC SKIN REACTION.

VAPOR HARMFUL

Contains: Oxime-based silane. Overexposure may cause blood and liver damage. May cause drowsiness. Causes eye, skin, nose and throat irritation. Avoid prolonged or repeated contact with skin. When using wear impermeable protective gloves. Avoid contact with eyes. Wear goggles or protective glasses with side shields. Wash thoroughly after handling. Avoid breathing vapors. **Use only with adequate ventilation.** Open windows and doors or use other means to ensure fresh air entry during application and curing.

First Aid: In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse. (Destroy contaminated shoes.)* (Thoroughly clean contaminated shoes.)* If affected by inhalation of vapor, remove to fresh air.

KEEP OUT OF REACH OF CHILDREN.

Company name and address

* Select most appropriate statement.

Sample Label 3 – Acetoxy-Based Silane Silicone Sealant

For silicone sealant products with health effects from **acetoxy silanes**. If the product to be labeled has ingredients that contribute hazards either other than or in addition to those shown, label statements to cover those hazards must be added to, or substituted for, the statements shown on this label.

WARNING!

CAUSES EYE, SKIN, NOSE, AND THROAT IRRITATION.

Contains: Acetoxy silane-based siloxanes. Forms acetic acid during curing and on contact with moisture. Avoid contact with eyes, skin and clothing. Gloves are recommended for prolonged or repeated contact with skin. Wear goggles or protective glasses with side shields. Wash thoroughly after handling. Avoid breathing vapors. **Use only with adequate ventilation.** Open windows and doors or use other means to ensure fresh air entry during application and curing.

First Aid: In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse. (Destroy contaminated shoes.)* (Thoroughly clean contaminated shoes.)* If affected by inhalation of vapor, remove to fresh air.

KEEP OUT OF REACH OF CHILDREN.

Company name and address

* Select most appropriate statement.

Sample Label 4 – Extremely Flammable/High Viscosity Cartridge Adhesive

For cartridge adhesive products with a principal hazard of a flash point at **or below 20°F, viscosity above 100 SUS at 100°F**, and other health hazard effects from inhalation of solvent vapor (statements 26, 5, 30) and skin/eye contact (statements 14, 16). Also refer to Table 4, “Product Specific Labeling Considerations” in Chapter 2.

For a two-panel label, split here
and add: “Read carefully other
cautions on the back/side panel.”
[16 CFR 1500.121(a)(3)]

DANGER!

EXTREMELY FLAMMABLE LIQUID AND VAPOR.

VAPORS MAY CAUSE FLASH FIRE.

HARMFUL OR FATAL IF SWALLOWED

Contains: (name of specific ingredients that contribute to the product’s hazard.) Harmful if inhaled. May affect the central nervous system causing dizziness, headache or nausea. Causes eye, skin, nose and throat irritation. **NOTICE:** Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.

Vapors may ignite explosively. Keep away from heat, sparks and flame. Do not smoke. Vapors may spread long distances. Extinguish all flames and pilot lights, and turn off stoves, heaters, electric motors and other sources of ignition during use and until all vapors are gone. Avoid breathing vapors. **Use only with adequate ventilation.** Prevent build-up of vapors by opening all windows and doors to achieve cross-ventilation. Avoid contact with eyes and skin. Wear appropriate gloves to prevent skin contact. Wear goggles or protective glasses with side shields. Wash thoroughly after handling.

First Aid: In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes. If affected by inhalation of vapor, remove to fresh air. If swallowed, get medical attention immediately.

KEEP OUT OF REACH OF CHILDREN.

Company name and address

Sample Label 5 – Hot-Melt Adhesive

For hot-melt adhesives which present hazards that include physical burns from molten material and health effects from decomposition products that react during the heating process. If the product to be labeled has ingredients that contribute hazards either other than or in addition to those shown, label statements to cover those hazards must be added to, or substituted for, the statements shown on this label.

For a two-panel label, split here
and add: "Read carefully other
cautions on the back/side panel."
[16 CFR 1500.121(a)(3)]

CAUTION!

CONTACT WITH HOT ADHESIVE AND APPLICATOR
TIP WILL CAUSE BURNS. VAPOR MAY CAUSE EYE
AND RESPIRATORY TRACT IRRITATION.

Contains: (name of specific ingredients that contribute to the product's hazard.)

Avoid contact with hot adhesive and applicator/gun tip. Avoid prolonged breathing of vapor from hot adhesive. Use only with adequate ventilation to prevent vapor build-up.

First Aid: In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes. Do not attempt to remove adhesive. If affected by inhalation of vapor, remove to fresh air. If swallowed, do not induce vomiting. Get medical attention immediately.

KEEP OUT OF REACH OF CHILDREN.

Company name and address

Sample Label 6 – Plaster-Based Repair Products

For dry, repair products (i.e., plaster of Paris) that are plaster based with health effects from **calcium sulfate**. If the product to be labeled has ingredients that contribute hazards either other than or in addition to those shown, label statements to cover those hazards must be added to, or substituted for, the statements shown on this label.

For a two-panel label, split here and add: "Read carefully other cautions on the back/side panel."
[16 CFR 1500.121(a)(3)]

WARNING!

CAUSES SKIN BURNS.

Contains: Calcium sulfate alpha-hemihydrate. When mixed with water this material hardens and then slowly becomes hot. **DO NOT** attempt to make a cast enclosing any part of the body using this material. Failure to follow these instructions may cause severe burns that may require surgical removal of affected tissues. When mixing or dry sanding, dust may cause irritation to eyes, nose, throat or upper respiratory system.

Close container after each use. Avoid exposure to dust by wearing an appropriate NIOSH approved particulate respirator. Avoid contact with eyes and skin. When using wear impermeable protective gloves. Wear goggles or protective glasses with side shields. Do not ingest.

First Aid: In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes. If affected by inhalation, remove to fresh air. If swallowed, get medical attention immediately.

KEEP OUT OF REACH OF CHILDREN.

Company name and address

¹ **Note:** Regular plaster of Paris is a nuisance dust and does not irritate eyes or skin. This contains calcium sulfate beta-hemihydrate. Although curing releases heat, use has not been associated with skin burns. Calcium sulfate alpha-hemihydrate is a denser form whose use has been associated with skin burns secondary to heat production.

Sample Label 7 – Dry/Ready-to-Use Repair Products

For dry or wet (rtu) repair products (i.e., spackling, joint compound) whose intended use is for patching, repairing, or finishing cracks, holes or joints in interior/exterior surfaces and have the potential to be dry sanded. The primary health hazard with this type of product is the potential for exposure to dust particles. If the product to be labeled has ingredients that contribute hazards either other than or in addition to those shown, label statements to cover those hazards must be added to, or substituted for, the statements shown on this label.

For a two-panel label, split here
and add: "Read carefully other
cautions on the back/side panel."
[16 CFR 1500.121(a)(3)]

CAUTION!

Contains: (name of specific ingredients that contribute to the product's hazard.)

Exposure to dust may cause build up of material in eyes, ears, nose and mouth. Prolonged inhalation of excessive amounts of dust may have adverse pulmonary and respiratory effects. When mixing or dry sanding, dust may cause irritation to eyes, nose, throat or upper respiratory system.

Use only with adequate ventilation. Provide fresh air ventilation during and after application. Close container after each use. Avoid exposure to dust by wearing an appropriate NIOSH approved particulate respirator. Avoid contact with eyes and skin. Wear appropriate gloves to prevent skin contact. Wear goggles or protective glasses with side shields.

First Aid: In case of eye contact, flush immediately with plenty of water for at least 15 minutes. In case of contact, immediately flush skin with soap and plenty of water. If inhaled, remove to fresh air. If swallowed, do not induce vomiting. Get medical attention immediately.

KEEP OUT OF REACH OF CHILDREN.

Company name and address

Sample Label 8 – for Isocyanate or Polyisocyanate Adhesives and Sealants

This label sample is for **isocyanate or polyisocyanate adhesives and sealants** containing 100 percent solids and either polymerized or monomeric toluene diisocyanate (TDI), hexamethylene diisocyanate (HDI), isophorone diisocyanate (IPDI) or diphenylmethane diisocyanate (MDI). If the product to be labeled has ingredients that contribute hazards either other than, or in addition to those shown for the solids and the diisocyanates listed, label statements to cover those hazards must be added to, or substituted for, the statements shown here.

WARNING!

OVEREXPOSURE MAY CAUSE LUNG DAMAGE.

MAY CAUSE ALLERGIC SKIN AND RESPIRATORY REACTION.

MAY CAUSE EYE, SKIN, NOSE AND THROAT IRRITATION.

Contains: (specify isocyanate or polyisocyanate)

INDIVIDUALS WITH LUNG OR BREATHING PROBLEMS OR PRIOR REACTION TO ISOCYANATES MUST NOT BE EXPOSED TO VAPOR OR SPRAY MIST. Do not breath vapor or spray mist. Wear an appropriate, properly fitted respirator (NIOSH approved) during application unless air monitoring demonstrates vapor/mist levels are below applicable limits. An airline respirator (NIOSH approved) is recommended. A vapor/particulate respirator (NIOSH approved) may be appropriate where airborne monitoring demonstrates vapor levels below ten times the applicable exposure limits. Follow respirator manufacturer's directions for respirator use.

Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Keep container closed when not in use. In case of spillage, absorb with inert material and dispose of in accordance with applicable regulations.²

First Aid: In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse. (Destroy contaminated shoes.)* (Thoroughly clean contaminated shoes.)* If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

KEEP OUT OF REACH OF CHILDREN.

Company name and address

Labeling Requirements under VOC Content Regulations

Air quality regulations exist at both the federal and state levels and may affect the formulation of products discussed in this chapter. The purpose of these regulations is to ensure the reduction of VOC emissions from caulks, sealants and adhesive products. Regulations limiting VOC content of consumer and industrial adhesives and sealants exist at the federal, state and local levels. It is the responsibility of the manufacturer to obtain the most up-to-date information from the appropriate federal and state agencies in order to ensure compliance. For a list of federal, state, and local adhesive and sealant regulations, please visit the “Member Area” of the ACA website at <https://www.paint.org/aca-member-center/corporate-member-center/>. **After logging in to the site, members can access information under the section marked, “VOC Regulatory Resources.”** Additional information is also available in this guide in *Chapter 7: Labeling for Emissions from Volatile Organic Compounds: Federal, State and Local Requirements*.

At the federal level, both EPA regulations and FTC guidance can affect labeling for VOC content and related emissions. Relevant regulations and guidance are listed below:

- [40 CFR Part 59](#), National Volatile Organic Compound Emission Standards for Consumer Products
- [FTC Guidelines](#). ACA has also developed a related guidance document available on the [ACA Member Center website](#) under the section *Regulatory Support Documents*. The ACA guidance document is called *FTC Labeling Requirement for Health and Environmental Marketing Claims and Certifications, covering VOC labeling requirements*.

State-level labeling rules for VOC content of consumer products generally apply to adhesives and sealants. Adhesive and sealant manufacturers must review state-level requirements where the product will be placed on the market to generate compliant labels. Requirements may vary depending on the type of adhesive and sealant product and container size. State and local regulations with labeling provisions for adhesives and sealants are discussed below:

- A. Regulation for Reducing Volatile Organic Compound Emissions from Consumer Products in California, 17 CCR Sections 94507 – 94515.
- B. Several states have adopted consumer products rules, including Maryland, Pennsylvania, Delaware, District of Columbia, New York, New Jersey, Maine, etc. These state consumer product rules are very similar as they are based upon the Ozone Transport Commission’s Model Rule (which was based upon the California Consumer Products Rule). Please see other parts of Chapter 7 of this guidance regarding labeling for VOC content for additional information.

Adhesive and sealant rules which regulate products greater than 16 ounces in size, except for aerosol adhesives, exist in almost all of the 25 air districts within the State of California. Additional information about types of adhesive and sealant products regulated at the air district level versus state level is available online for Rule 1168. Rule 1168 in the South Coast Air Quality Management District is the most comprehensive of the air district rules. Rule 1168 is available online.

California’s General Requirements for Labeling Aerosol Adhesives and Contact Adhesives

California’s Air Resources Board’s (CARB) Consumer Product Rules, at 17 CCR §94512(d)(1)(D)), provides an example of a state-level VOC content labeling requirement for adhesive and sealant products. Under 17 CCR §94512(d)(1)(D)), the following information must be clearly displayed on each product container:

- a. The product category or an abbreviation for the product category;
- b. The applicable VOC standard for the product;
- c. If the product is a special purpose spray adhesive, the applicable substrate and/or an abbreviation of the applicable substrate that qualifies the product as a special purpose;
- d. The day, month, and year on which the product was manufactured or a code indicating such date.

Please note that the above information should be displayed on the product container so that it is readily observable without removing or disassembling any portion of the product container or packaging. This information may be displayed on the bottom of the container, so long as it is clearly legible without removing any product packaging. In addition, if abbreviations are used, an explanation of the abbreviation must be filed with the Executive Officer of the California Air Resources Board before the abbreviation is used.

Compliance with the “Most Restrictive Limit” Requirements

Under the consumer products rules in California and the Ozone Transport Commission (OTC) states, and in the industrial adhesives rules in the California air districts, there are limitations on the usage claims that can be made on the principal display panel, on the container or packaging and in some circumstances, even stickers or labels affixed to the container or packaging. Generally, claims regarding the usage or performance characteristics of the product must be consistent with the product category as required by the governing air quality regulation (see the above requirement to clearly display the product category on the product container).

Currently, the California consumer products rule and the air district rules for industrial adhesives indicate that if anywhere on the principal display panel, any representation is made that the product may be used as or is suitable for use as another product with a lower VOC limit, then the lower VOC content limit will apply. Essentially, the regulation will reclassify your product and put it in a lower VOC category if there are usage claims consistent with a lower VOC content limit product category. This requirement applies to any representation made on the principal display panel and anywhere on the container or packaging, including stickers or labels affixed onto the container or packaging.

In the OTC states that have adopted the model Consumer Products rule, the “most restrictive limit” provision relates solely to the principal display panel. This is also true for the industrial adhesives rules in the California air districts.