



MARKET ANALYSIS

FOR THE PAINT & COATINGS INDUSTRY [2019 – 2024]



Chapter 10

Automotive OEM Coatings

Sample chapter

Questions? Contact Aggie Lotz at alotz@chemquest.com or at 412.781.320

Scope

- Coatings that protect + decorate new light vehicles ➡ passenger cars + light commercial vehicles
 - Primarily [] coatings, with [] use of powder/powder-slurry; energy-cured and [] coatings
- Application
 - Factory setting by OEM or its independent parts manufacturers (tier suppliers)
 - Plastic and metal substrates for interior, exterior, and underbody applications for new cars, light trucks, vans (including minivans), and sport utility vehicles (SUVs)
 - Typical steps: [] (innovations in progress)
- Exclusions
 - Powder coatings except (Chapter 6)
 - Heavy-duty truck, bus, and recreational vehicles (Chapter 11)
 - Refinish, refurbishment, or aftermarket applications (Chapter 20)

MARKET OVERVIEW

2019 Automotive Coatings within OEM Coatings Sector

Figure 10-1: 2019 Automotive Coatings Volume – X Million Gallons

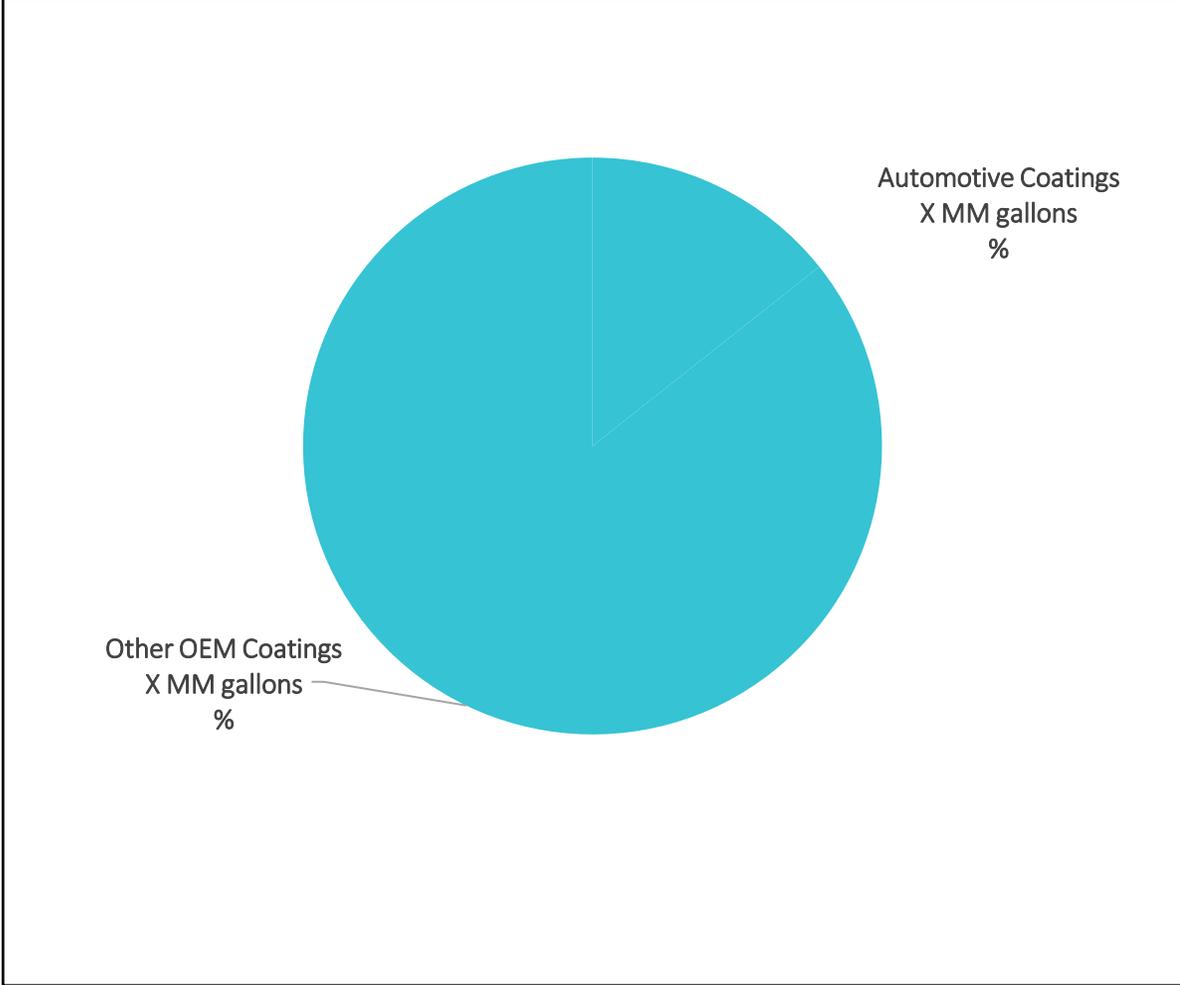
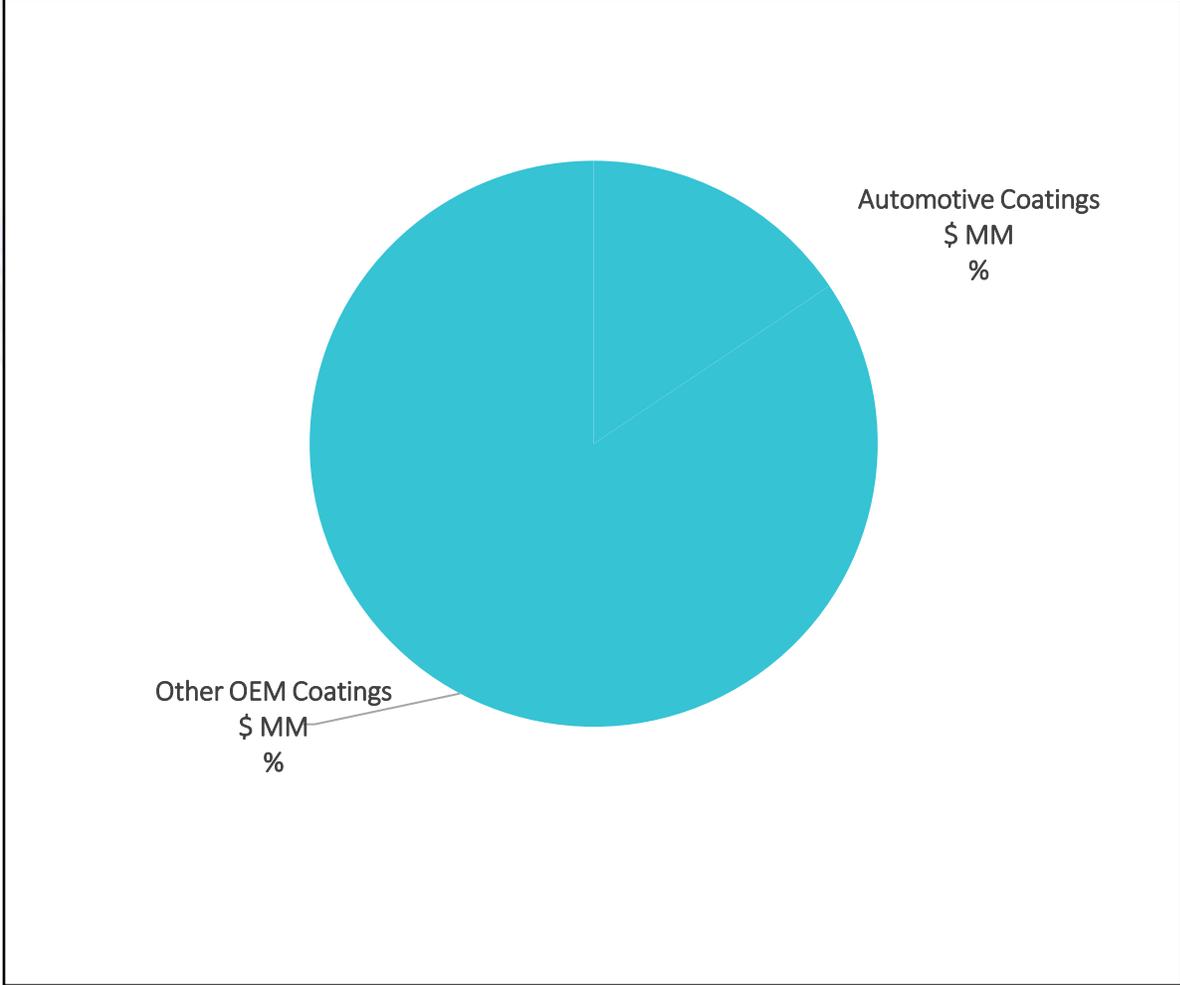


Figure 10-2: 2019 Automotive Coatings Value – \$Y Billion



Source: The ChemQuest Group, Inc.

Sector Analysis

- Sector: Industrial OEM Coatings
- Automotive OEM coatings volume demand:
 - 2019 revenues: \$Y MM on sales of X MM gallons
 - 2014–2019 comparison (5-year CAGR): X% increase in volume; Y% increase in value
- Automotive OEM coatings: [CQ data here]
 - X% of volume and Y% of value of 2019 OEM market
 - X% of volume and Y% of value of overall 2019 U.S. coatings market
 - Only [CQ data here] are larger segments by value.
 - Average sales price of \$P per gallon is P% higher than the average OEM selling price and P% higher than total U.S. market's average selling price
 - [CQ data here]
 - Sales color preference: [CQ data here] = % (2025 forecast: %); other colors = %

Quantitative Data (2014–2019)

Market Size and Growth Rates

Table 10-1: Historical Annual Growth Rates, Auto Coatings (2014–2019)

Year	Volume Gal (Millions)	Value Dollars (\$Millions)	AGR Volume (%)	AGR Value (%)	Average Price (\$/Gal)	AGR Price (%)
2014	CQ data here					
2015						
2016						
2017						
2018						
2019						

Table 10-2: 5-Year CAGR Automotive Coatings (2014–2019)

	2014	2019	CAGR (2014–2019)
Volume (MM gallons)	CQ data here		
Value (\$ MM)			
Price (\$/gallon)			

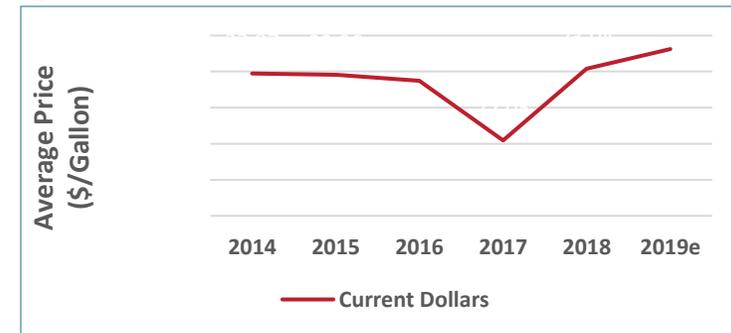
Source: The ChemQuest Group, Inc.

Estimated Market Growth – Volume, Value, Price

Figure 10-3: Volume/Value of Automotive Coatings (2014–2019)



Figure 10-4: Automotive Coatings, 5-Year Price Growth



Trends (2014–2019)

Overview

- 5-year CAGR: X% for volume (U.S. average); Y% for value (not adjusted for inflation)

Table 10-3: Cost of Coating Materials by Function (2019)

Coating Materials	Per Vehicle Cost
Pretreatment**	
Underbody	
Interior	
APC	
Exterior Body	

** Pretreat imparts:

Source: The ChemQuest Group, Inc.

Price Drivers (2014–2019)

- 5-year CAGR: % for price (not inflation adjusted)

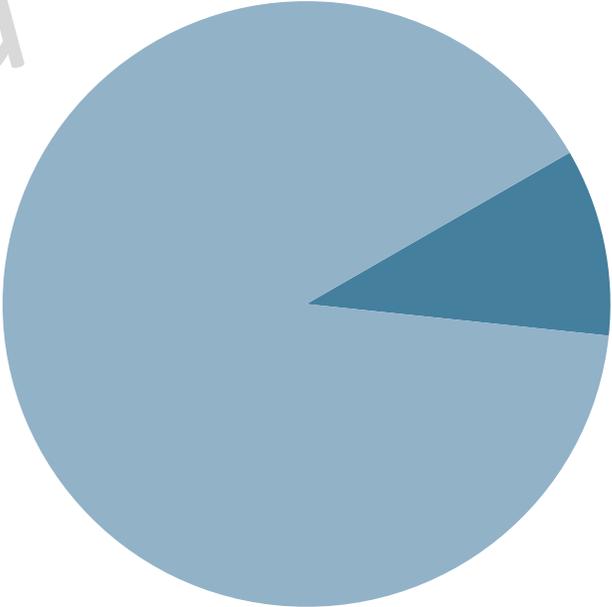
CQ Data

Estimated Market Share of Automotive Coatings Producers (2019)

Overview

- 3 suppliers = % of OEM sector
- Remaining market:
 - Notable suppliers:
- Industry trends:

Figure 10-5: Estimated Market Share (2019)



Source: The ChemQuest Group, Inc.

MARKET DYNAMICS

End-Use Markets and Applications

- Coatings used on automotive parts by OEMs and tiers

CQ Data

U.S. Vehicle Retail Sales and Miles Driven (2010–2019)

Figure 10-6: SAAR Auto and Light Truck Sales

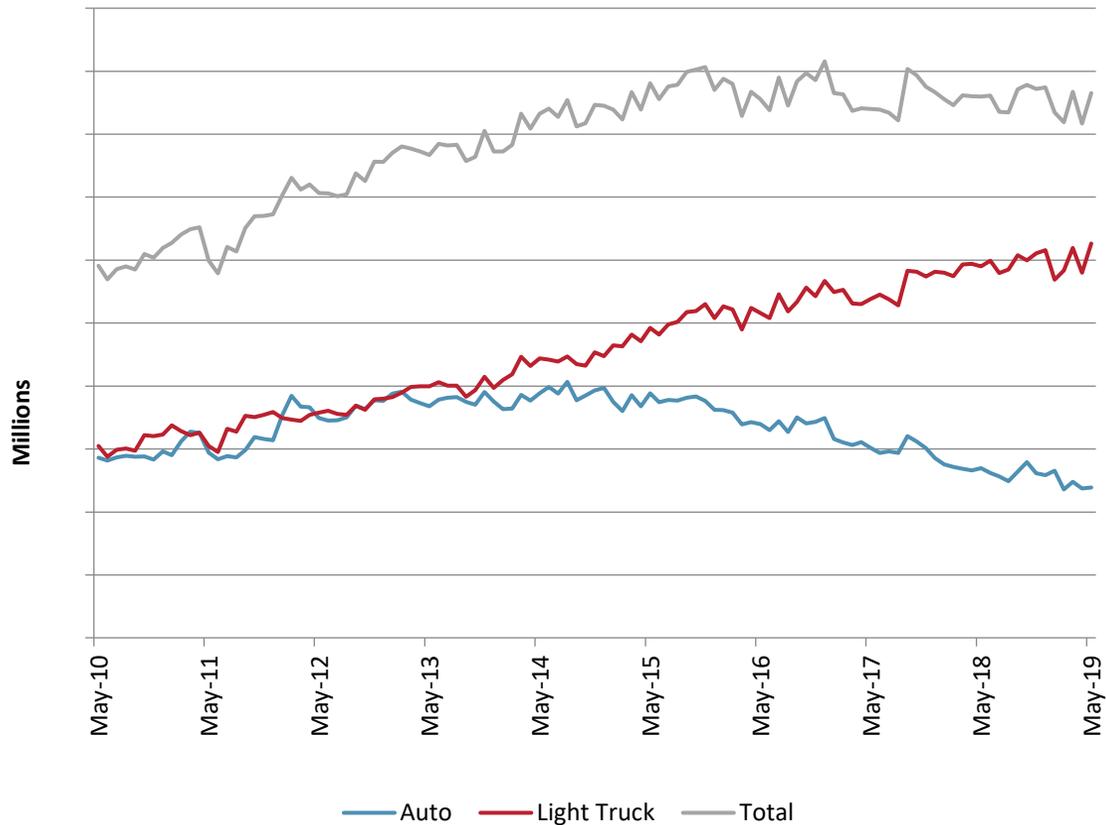


Figure 10-7: 12-Month Total Vehicle Miles Traveled



Source: U.S. Census Bureau, U.S. Federal Highway Administration, The ChemQuest Group, Inc.

Economic Influences

- Automotive OEM coatings market reflects

CQ Data

Economic Influences

Overview

CQ Data

Figure 10-8: Light Auto Sales Vs. GDP (2009–2019)

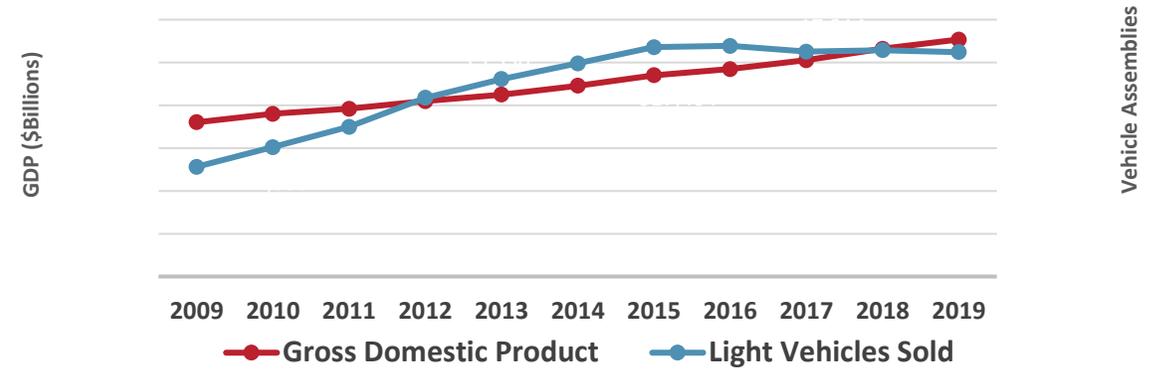


Table 10-4: 5-Year Light Vehicle Sales Growth

	2014	2019	CAGR (2014–2019)
Total Sales	CQ Data		

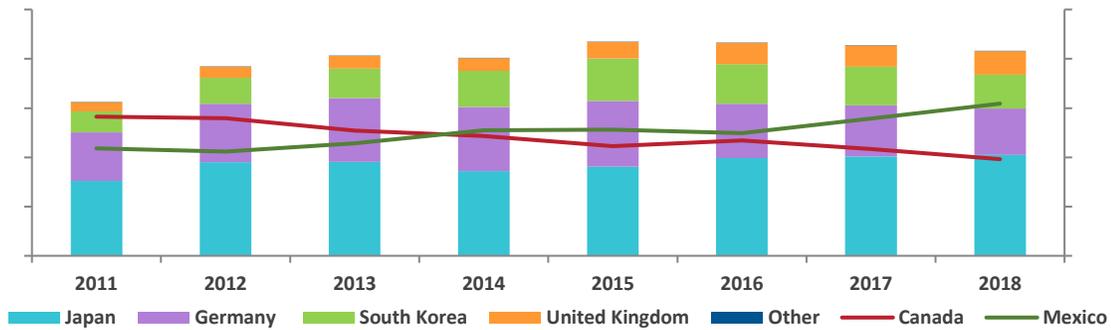
Source: Bureau of Economic Analysis, Bureau of Transportation Statistics

Trade Influences

Overview

- Domestic vehicle production is affected by

Figure 10-9: Imports of Vehicles and Parts by Country of Origin (2011-2018)



Source: TradeStats Express

Figure 10-10: Vehicle and Auto Parts Trade Estimates (NAFTA 2017)



Source: ChemQuest, U.S. Dept. of Commerce, AMIA, Statistics Canada, Marklines, Nomura estimates

TECHNOLOGY OVERVIEW

Technology Trends and Drivers

- Waterborne paints:
- Solventborne paints:
- Increasing use of
- Other:

COQ Data

Technology Trends and Drivers

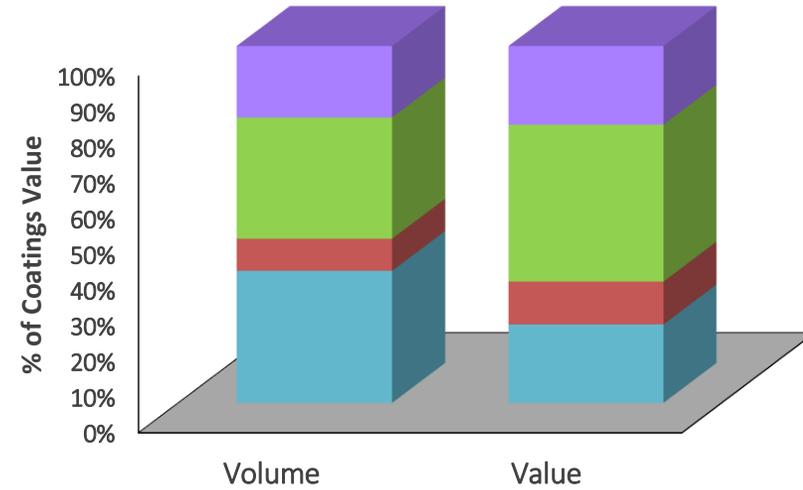
Overview

- Application process:
- Resins:

CQ Data

Figure 10-11: Coatings Product Type Share (2019)

X MM gallons valued at \$Y MM



Source: The ChemQuest Group, Inc.

R&D Initiatives

CQ Data

R&D Initiatives

CQ Data

R&D Initiatives

CQ Data

FIVE-YEAR FORECAST

Regulatory and Environmental Influences

CQ Data

Electric Vehicle Sales Forecast (2023)

Figure 10-12: U.S. Share of Electric Vehicle Sales

- In 2018, global EV sales reached X units, an X% jump over 2017.

Source: Bloomberg New Energy Finance (2018 Forecast)

By Dec 31, 2023:

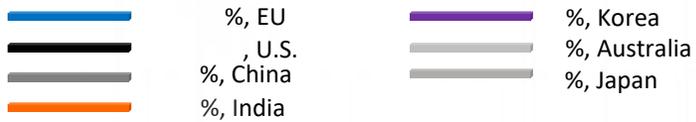


Figure 10-13: Volume of U.S. Commercial Electric Light Trucks (2020–2030f)

CQ Data

Note: in 1,000 units

Key Buying Factors

Overview

- Coatings must be
- Condition of doing business:
- Price =
- Service =
- Performance =

Automotive OEMs' Buying Prerequisites

CO Data

Quantitative Data (2019–2024f)

Market Size and Growth Rates

Table 10-5: Annual Growth Rates, Automotive Coatings (2019–2024f)

Year	Volume Gal (MM)	Value Dollars (\$ MM)	AGR Volume (%)	AGR Value (%)	Average Price (\$/Gal)	AGR Price (%)
2019						
2020f						
2021f						
2022f						
2023f						
2024f						

Table 10-6: 5-Year CAGR Automotive Coatings (2019–2024f)

	2019	2024f	CAGR 2019-2024f)
Volume (MM gallons)			
Value (\$ MM)			
Price (\$/gallon)			

e = estimate
f = forecast

Source: The ChemQuest Group, Inc.

Estimated Market Growth – Volume, Value, Price

Figure 10-14: Volume/Value of Automotive Coatings (2019–2024f)

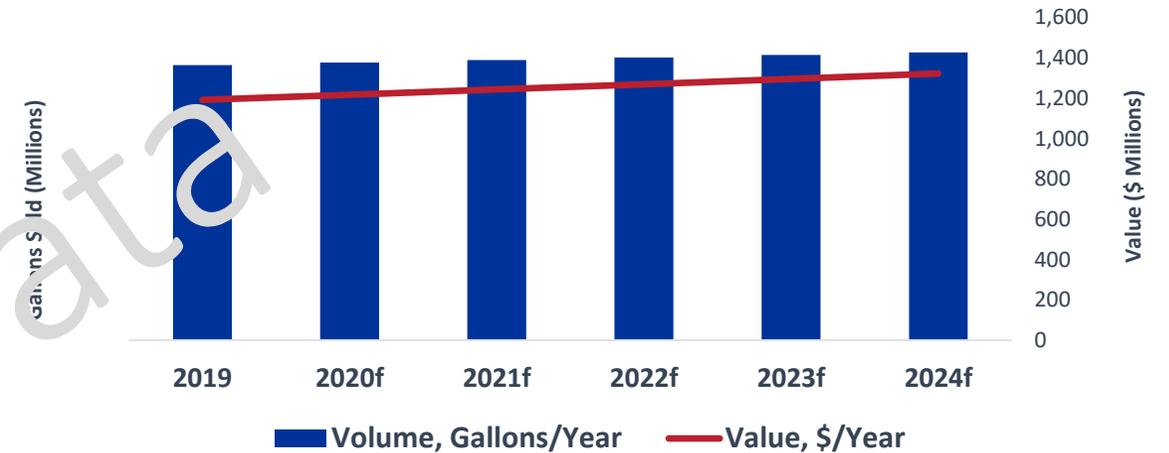
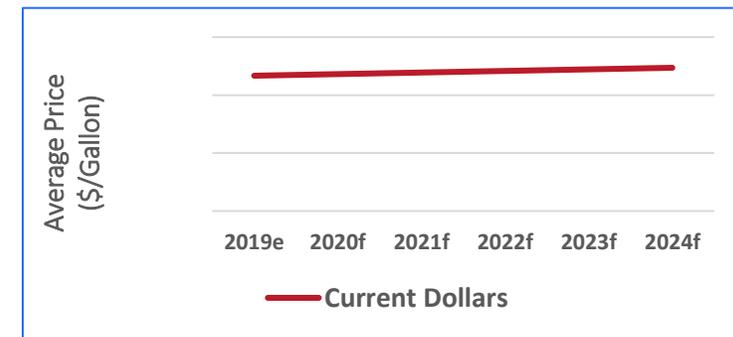


Figure 10-15: Auto Coatings, 5-Year Price Growth



Trends and Drivers (2019–2024)

Trends

- 5-year CAGR: X% for volume; Y% for value (not inflation adjusted)
- 2024f forecast: X MM gallons valued at \$Y MM. Value is expected to [CQ Data]
- Anticipated: higher use of

Drivers

- 5-year CAGR: P% for price (not inflation adjusted)
- Future price growth:

CQ Data

Future Technology Trends

CQ Data

Future Technology Trends

CQ Data

Advances in Corrosion Resistance

CQ Data

Advances in Corrosion Resistance

CQ Data

PORTER'S FIVE FORCES ANALYSIS

Porter Index: X – A Snapshot in Time of Market Attractiveness

Overview

- Porter Index of X is indicative of
- Basis for its Porter Index of X:
 - Porter Index: X

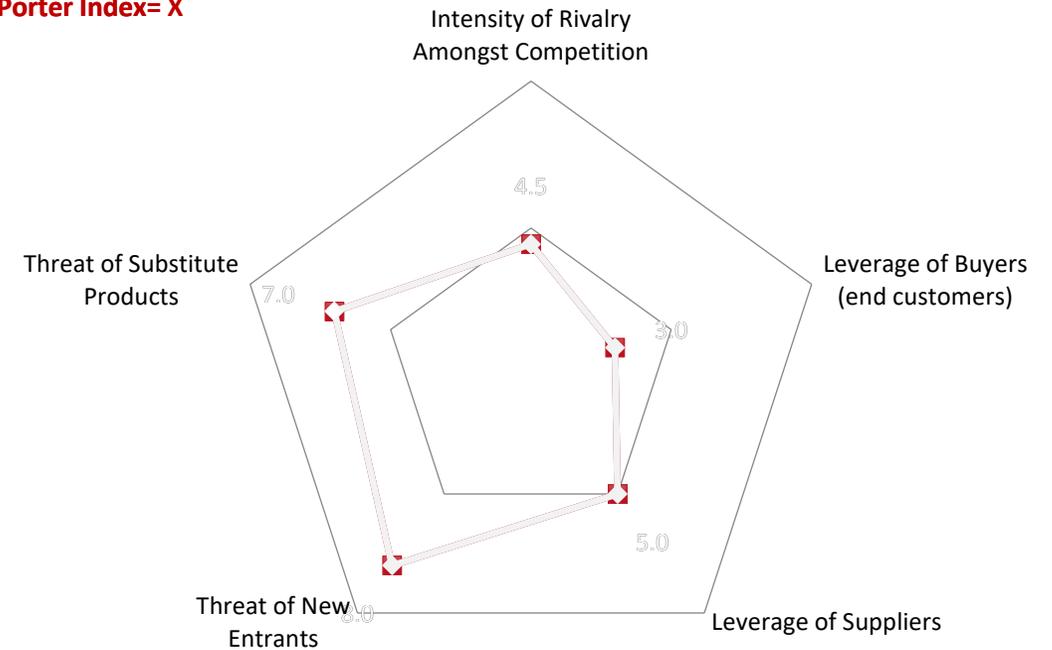
Porter Index: X

CO Data

Figure 10-16: Industry Structure Analysis

Industry Structure Five Force Analysis

Porter Index= X



Source: The ChemQuest Group, Inc.

Porter Index: X – A Snapshot in Time of Market Attractiveness

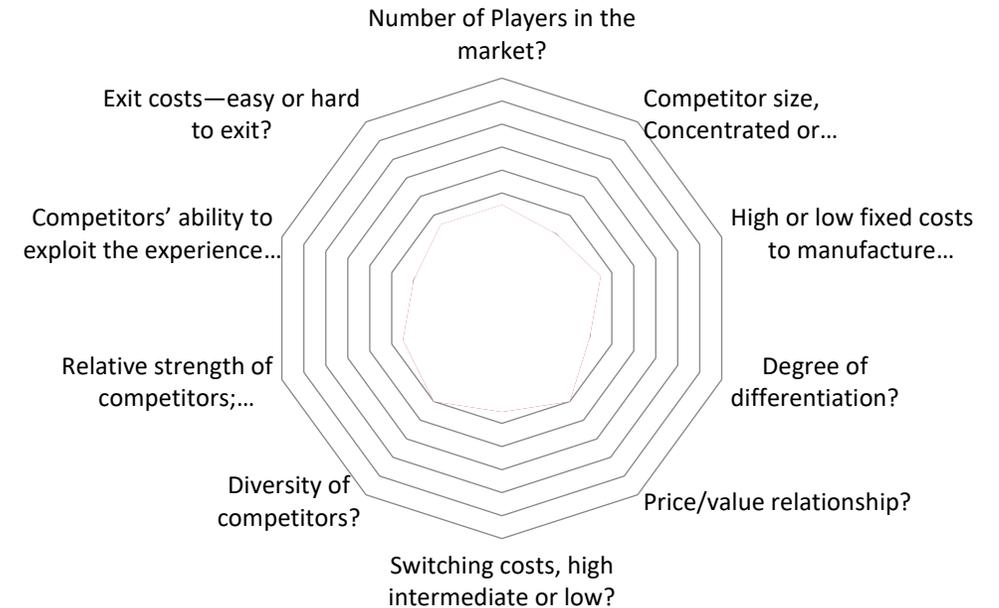
Overview

- This market segment is
- Since products require
- There is a high X relationship
- Switching costs, therefore, are

COQ Data

Figure 10-17: Intensity of Rivalry Amongst Competition

Factors for Rivalry



Source: The ChemQuest Group, Inc.

Porter Index: X – A Snapshot in Time of Market Attractiveness

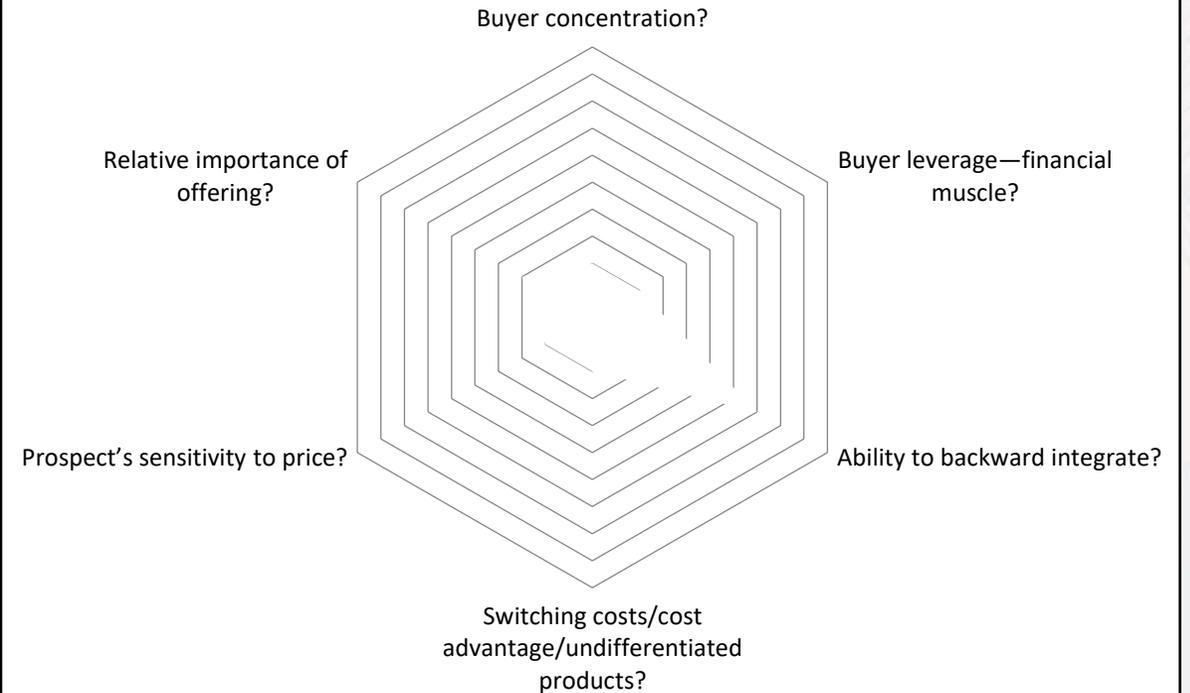
Overview

- Given its coating supplier X, buyers have
- The offering is
- Switching costs are
- Buyers do not

CQ Data

Figure 10-18: Leverage of Buyers (End Customers)

Factors for Leverage of Buyers



Source: The ChemQuest Group, Inc.

Porter Index: X – A Snapshot in Time of Market Attractiveness

Overview

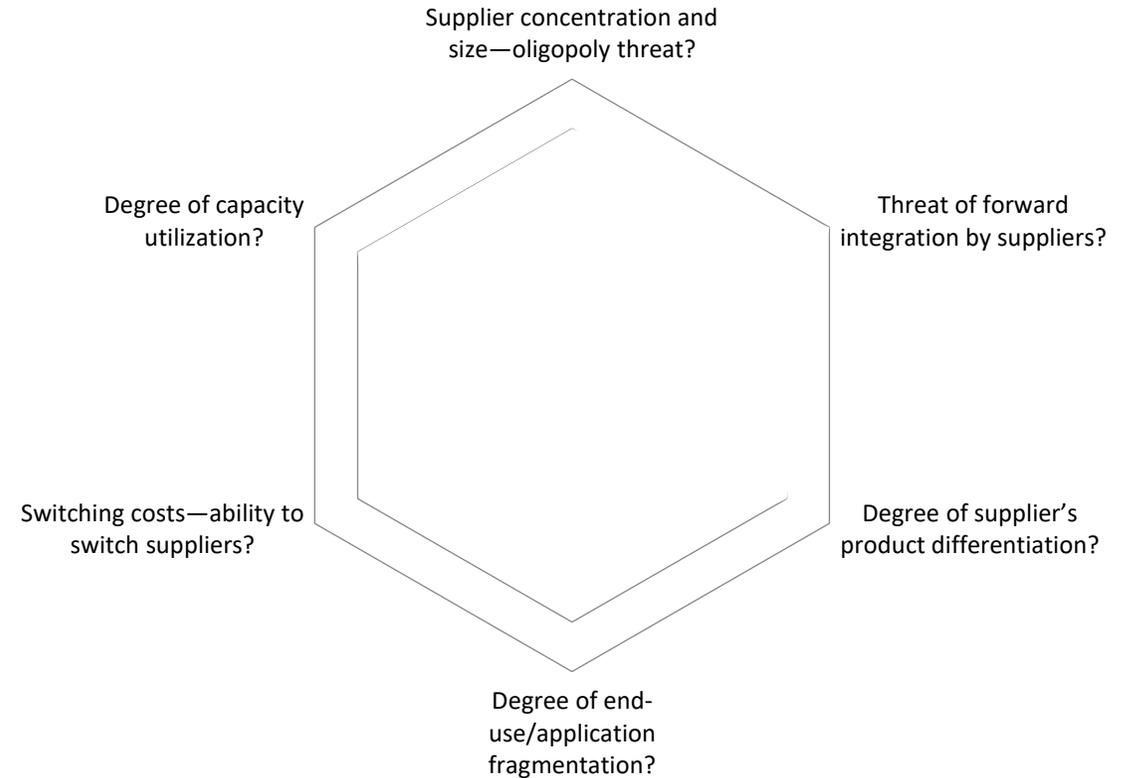
- There is
- The automotive market segment

CQ Data

Source: The ChemQuest Group, Inc.

Figure 10-19: Leverage of Suppliers

Factors for Leverage of Suppliers



Porter Index: X – A Snapshot in Time of Market Attractiveness

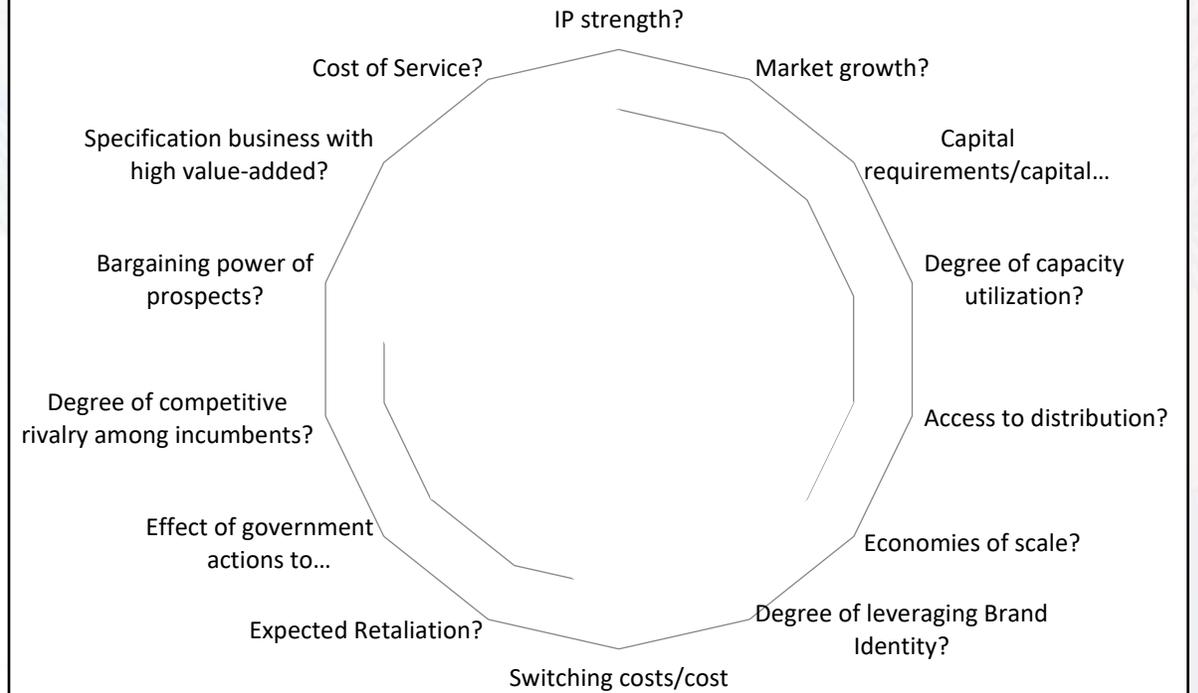
Overview

- Potential new entrants

CQ Data

Figure 10-20: Threat of New Entrants

Factors for Threat of New Entrants



Source: The ChemQuest Group, Inc.

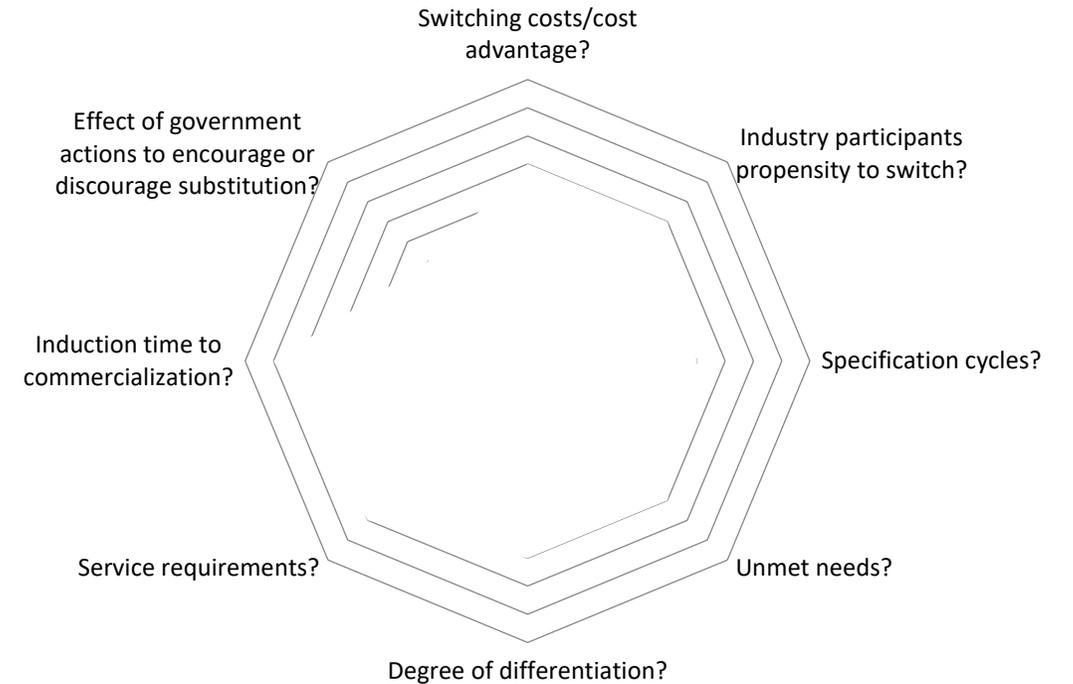
Porter Index: X – A Snapshot in Time of Market Attractiveness

Overview

CQ Data

Figure 10-21: Threat of Substitute Products

Factors for Substitute Products



Source: The ChemQuest Group, Inc.

Important Takeaways

- Overall demand has
- Industry trends
- CAGR (2019-2024f forecast): X% increase in volume; Y% increase in value.
 - CAGR: P% paint price/gallon
- 2024 paint demand forecast: X MM gallons valued @ \$Y MM

CO Data



GLOBAL

MARKET ANALYSIS

FOR THE PAINT & COATINGS INDUSTRY [2019 – 2024]



World
Coatings
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ChemQuest



**NEW and
EXPANDED
CHAPTERS!**

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Chapter 6

Automotive OEM Coatings

Sample chapter

Questions? Contact Aggie Lotz at alotz@chemquest.com or at 412.781.320

Scope

- Coatings that protect + decorate new passenger vehicles
 - Primarily [] coatings, ; [] usage of powder, powder-slurry, and energy-cured coatings
- Application
 - Factory setting by OEM or its independent parts manufacturers (tier suppliers)
 - Plastic and metal substrates for interior, exterior, and underbody applications for new cars, light trucks, vans, and sport utility vehicles (SUVs)
 - Typical steps: []
- Exclusions
 - Powder coatings (Chapter 3)
 - Other transportation vehicles (Chapter 8) and vessels (Chapter 12)
 - Refinish, refurbishment, or aftermarket applications (Chapter 11)

MARKET OVERVIEW

2019 Automotive Coatings within the Industrial OEM Sector

Figure 6-1: Automotive Coatings Volume – X Billion Liters

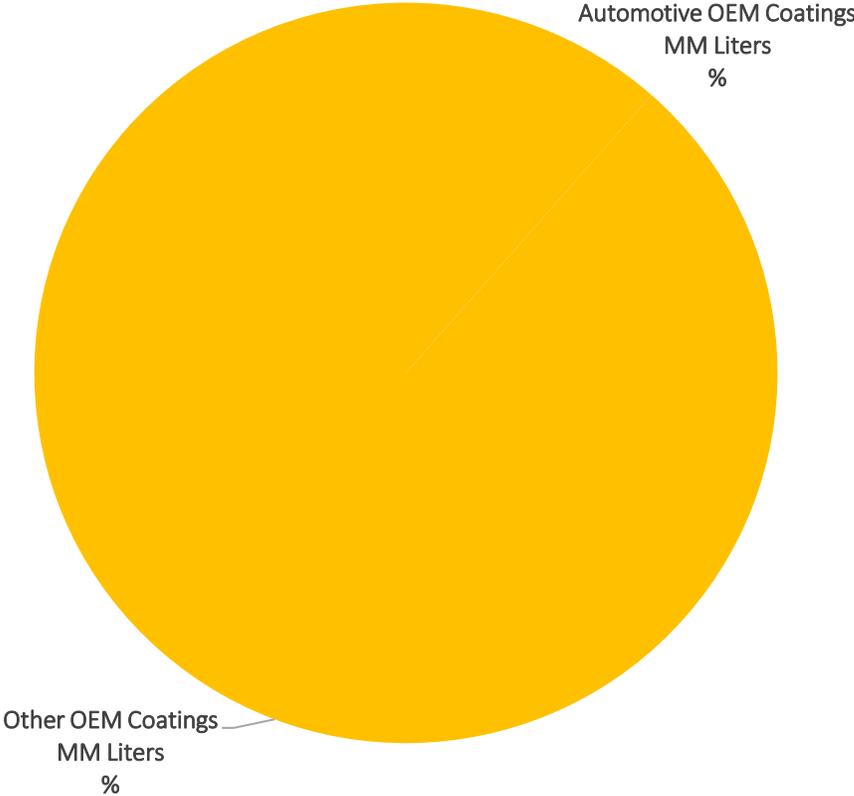
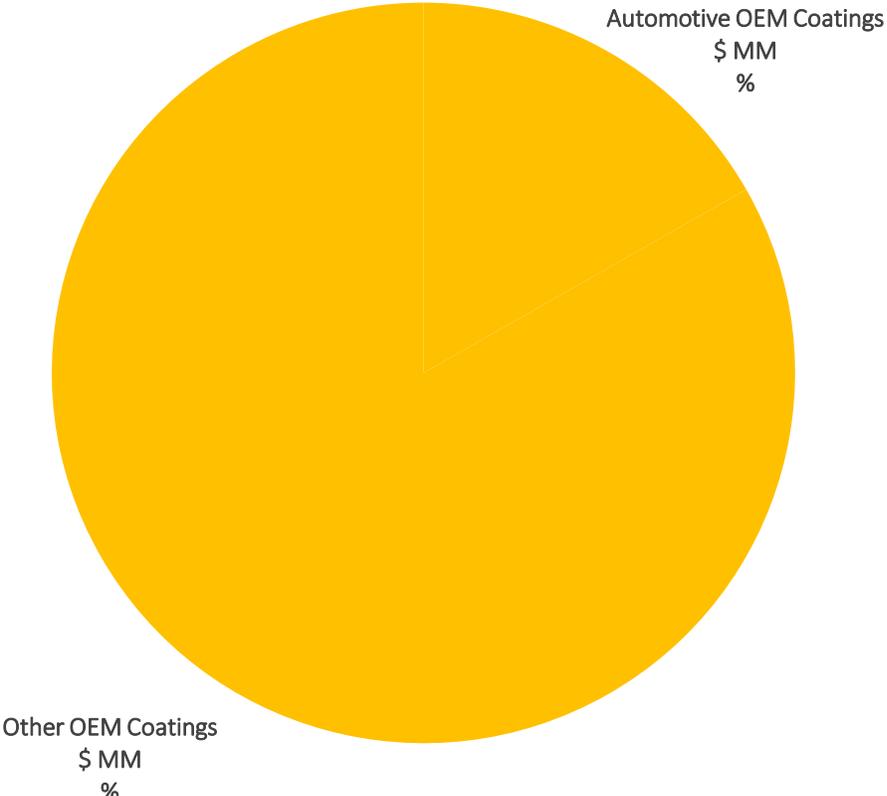


Figure 6-2: Automotive Coatings Value - \$Y Billion



Source: The ChemQuest Group, Inc.

Sector Analysis

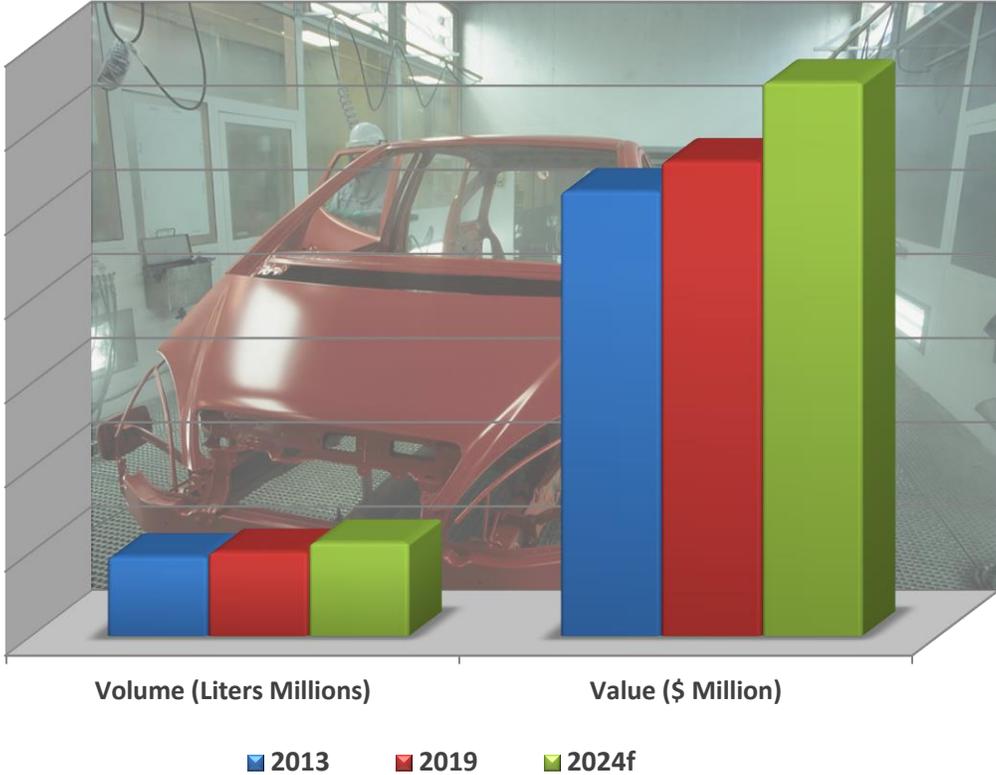
- Sector: industrial OEM coatings
- Automotive OEM coatings sales volume and revenue: increased
 - 2013 revenues: \$Y billion sales on X billion liters
 - 2019 revenues: \$Y billion sales on X billion liters
 - 2013–2019 comparison (CAGR): X% increase in volume; Y% increase in value.
 - 2024f revenues: \$Y billion sales on X billion liters
 - 2019–2024f comparison (CAGR): X% increase in volume; Y% increase in value.
- Automotive OEM coatings: volume/value = []
 - X% of volume and Y% of value of 2019 industrial OEM market
 - X% of volume and Y% of value of overall 2019 global coatings market

Quantitative Data (2013–2024f)

Table 6-1: Volume, Value, Price Growth (2013–2024f)

	2013	2019	2024f
Volume (Million Liters)	CQ data here	CQ data here	CQ data here
Value (\$ Million)	CQ data here	CQ data here	CQ data here
Average Selling Price \$/Liter	CQ data here	CQ data here	CQ data here
	2013	2019	2024f
Volume		CQ data here	CQ data here
Value		CQ data here	CQ data here
Average Selling Price		CQ data here	CQ data here

Figure 6-3: Volume/Value of Automotive Coatings (2013–2024f)



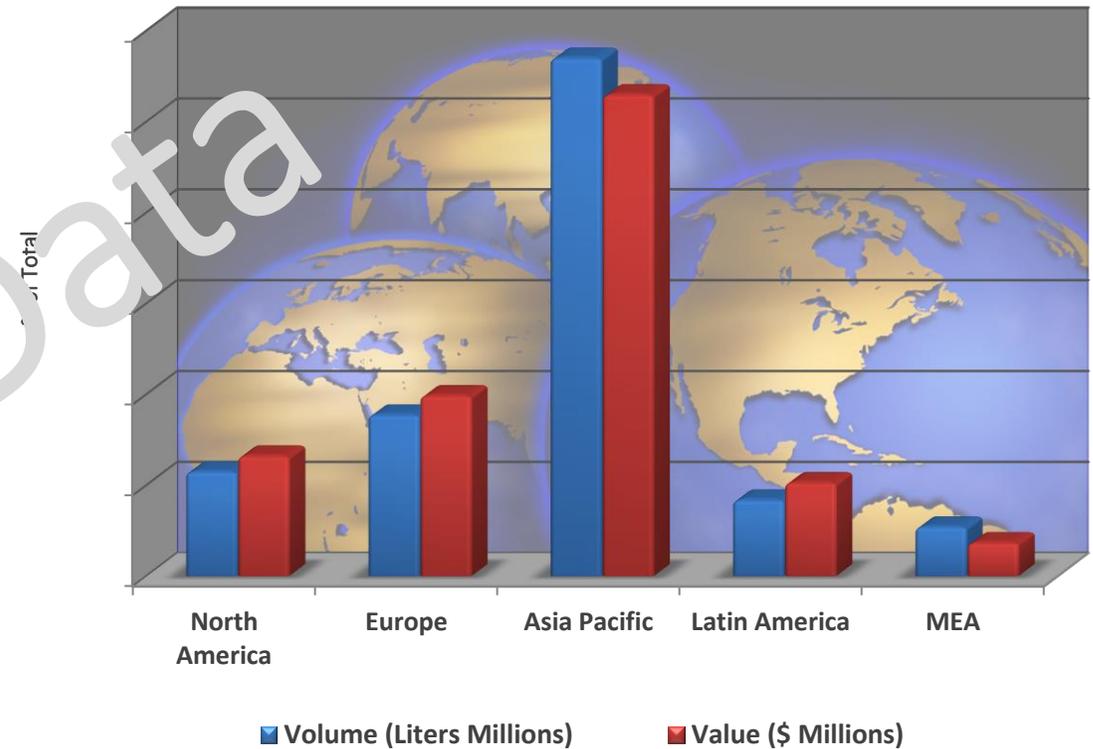
Source: The ChemQuest Group, Inc.

Regional Distribution

Overview

- Coatings are applied

Figure 6-4: Regional Distribution of Volume and Value (2019)



Source: The ChemQuest Group, Inc.

MARKET DYNAMICS

End-Use Markets

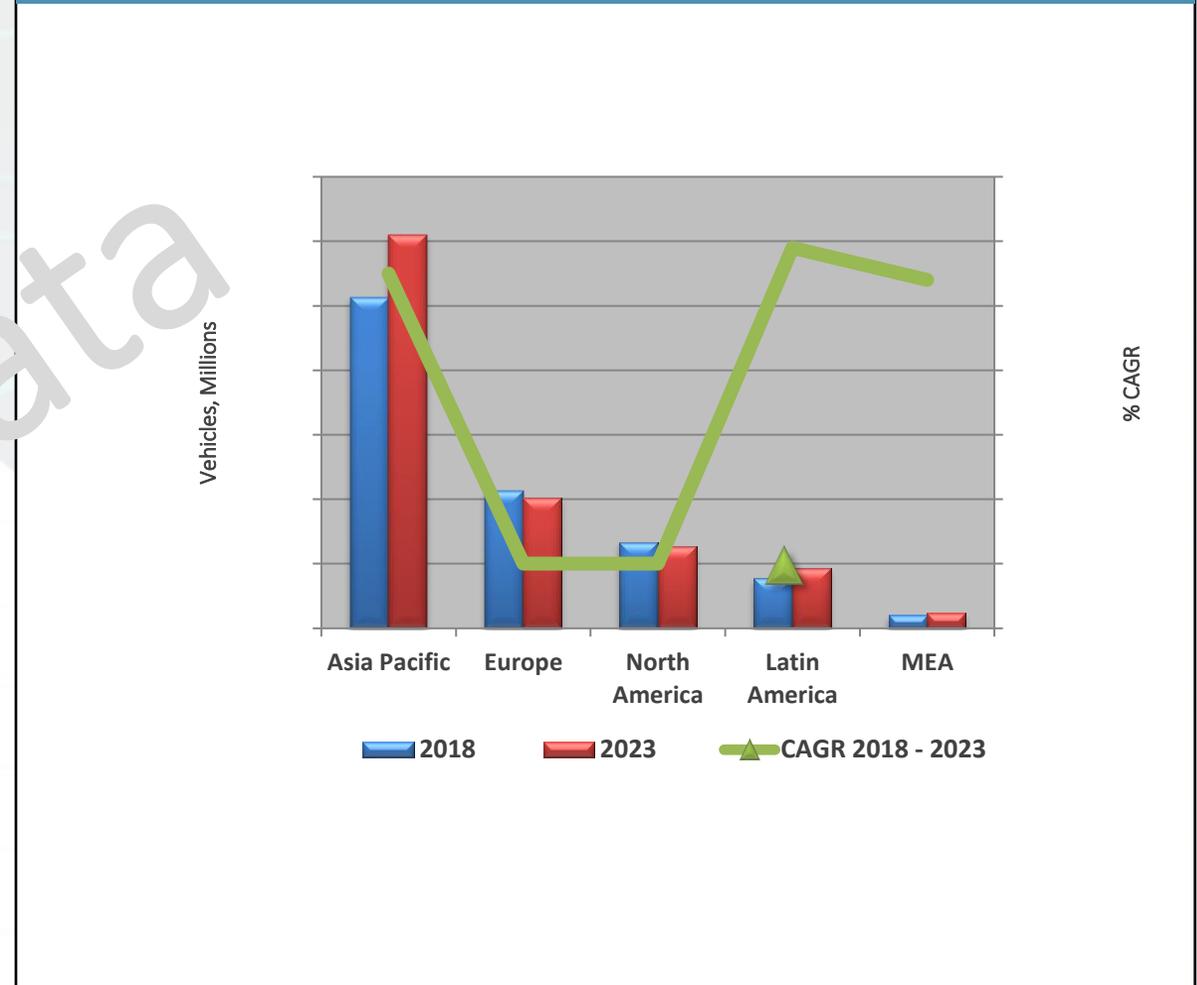
CQ Data

Regional Vehicle Production (2018–2023)

Table 6-3: Vehicle Production by Region (2018)

(Table content is obscured by a large watermark 'CO Data')

Figure 6-5: Forecast Production Growth by Region (2018–2023)



Source: OICA, IHS Automotive, the ChemQuest Group

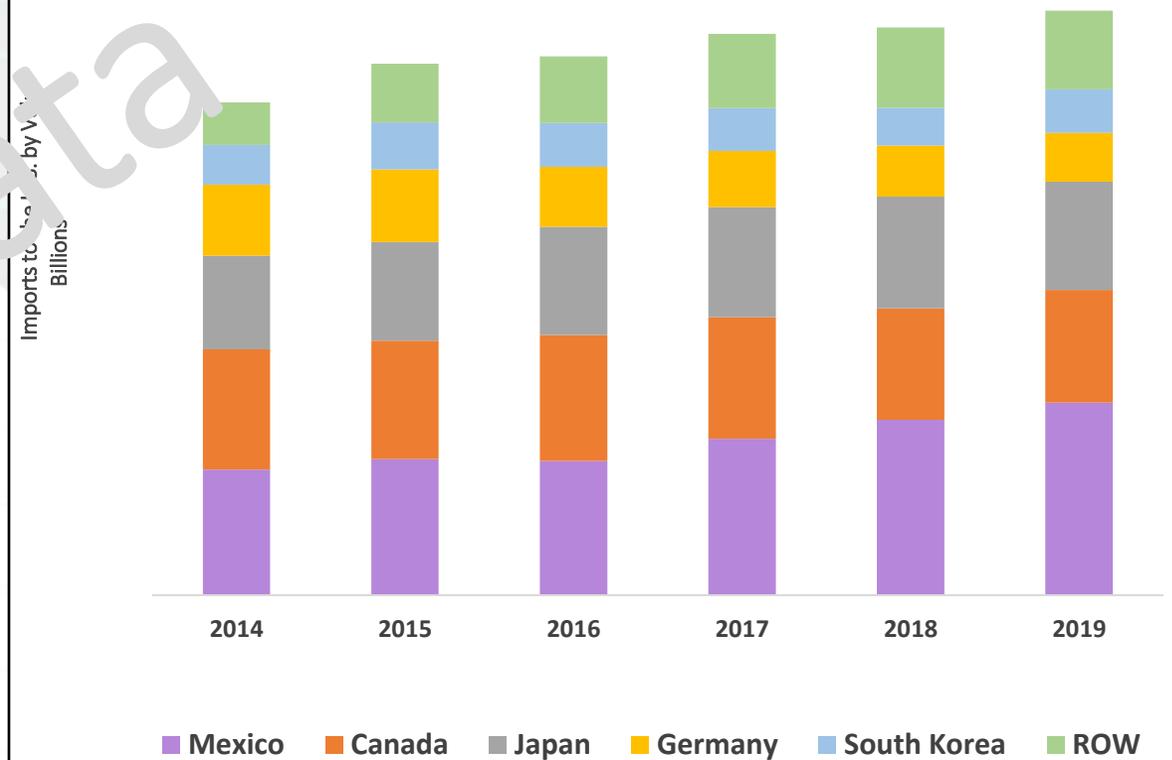
Economic Influences

CQ Data

Trade Influences

Overview

Figure 6-6: Imports of NAICS 3361 - Motor Vehicles (2019)



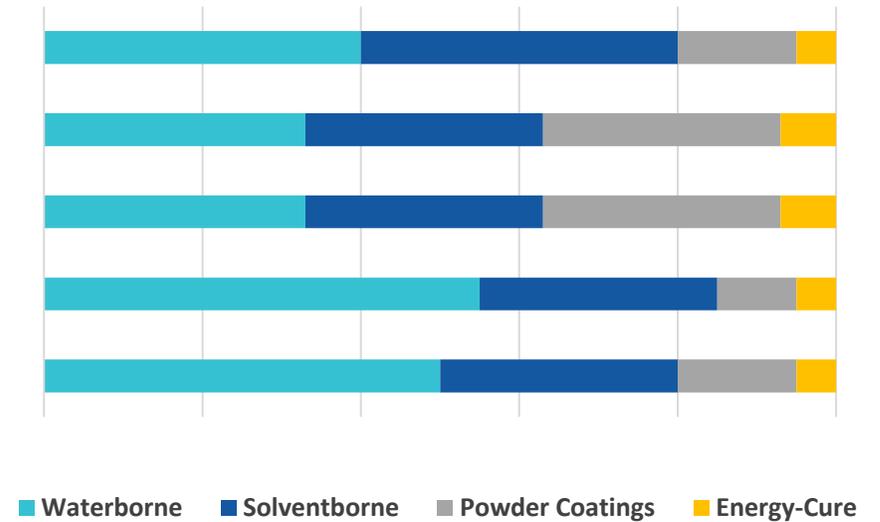
Sources: TradeStats Express, The ChemQuest Group, Inc.

TECHNOLOGY OVERVIEW

Technology Trends and Drivers

Overview

Figure 6-7: Regional Auto OEM Technology Share by Volume (2019)



Sources: The ChemQuest Group, Inc.

Technology Trends and Drivers

Overview

- Application process: evolution in progress
- Resins:

Overview

- R&D efforts

CQ Data

Technology Trends and Drivers

Overview

- R&D efforts (continued)

Figure 6-8: Global Color Preferences (2019)

CQ Data

FIVE-YEAR FORECAST

Regulatory and Environmental Influences

- From a coating perspective:
- From a vehicle perspective:

CO₂ Data

Key Buying Factors

CQ Data

CONCLUSION

Important Takeaways

- Coating demand
 - CAGR (2019–2024 forecast): X% increase in volume; Y% increase in value.
 - CAGR: P% average selling price/liter
 - 2024 coatings demand forecast: X billion liters valued at \$Y billion
- Coatings market reflects:

CQ Data