Asia Pacific Coatings Region: Poised for Continued Growth through 2024

By George J. Pitcher
The ChemQuest Group, Inc.

INTRODUCTION
The Global Market Analysis for the Paint and Coatings Industry (2019–2024) will be released by the American Coatings Association (ACA), on behalf of the World Coatings Council. Prepared by its international consultant, The ChemQuest Group, Inc., the report features extensive research findings and insights into current global and regional coatings consumption in fluid-use segments, as well as trends and drivers influencing the market.

The report also provides a five-year forecast of the coatings market segments, as well as an analysis of the market growth drivers. It includes a comprehensive database, including market size, growth rates, and forecast projections for each region and country. This information is based on a wide array of resources, including industry reports, market research, and primary data collected through interviews with key stakeholders in the coatings industry.

Asia Pacific Region

China, with roughly 60% of the entire coatings volume of APAC, is clearly the most important coatings producer and user in the region with India (18% of regional volume) a distant second. Followed by Southeast Asia, Australia, and New Zealand, regions that are extremely small, representing -0.06% of all volume and 2% of the value. It is therefore grouped with the nations under the category of "Other APAC" (see Table 1).

Unlike the North American and European regional values, which typically lag behind volume in APAC, although for Japan, South Korea, and China, these ratios are much higher.

This article examines the coatings industry in the Asia Pacific (APAC) region—one of five regional segments detailed in the Global Market Analysis report. It provides insights into the growth drivers and challenges facing the coatings industry in this region, including market trends, technological advancements, and regulatory frameworks.

TABLE 1 – Key regional Categories

<table>
<thead>
<tr>
<th>Region</th>
<th>Key Countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Southeast Asia</td>
<td>Afghanistan, Bangladesh, Cambodia,</td>
</tr>
<tr>
<td></td>
<td>India, Indonesia, Malaysia, Myanmar</td>
</tr>
<tr>
<td>South Asia</td>
<td>Bhutan, Nepal, Sri Lanka, Thailand</td>
</tr>
<tr>
<td>Oceania</td>
<td>Australia, New Zealand, New Zealand</td>
</tr>
<tr>
<td>Europe</td>
<td>Belgium, Denmark, Germany, Ireland</td>
</tr>
<tr>
<td>North America</td>
<td>Canada, Mexico, United States</td>
</tr>
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The report also presents a five-year forecast of the coatings market segments. Insights contained in the report are based on a wide array of resources, including insightful economic data, from numerous countries, major trade association statistics and reports, and in-depth interviews with coatings professionals, including key coatings customers and end-users. The in-depth interviews enabled the authors to provide rich and unparalleled insights into trends, market drivers, pricing, customer needs, technology challenges, key buying factors, market forecasts and other critical issues.

For the first time, the Global Market Analysis is being published in tandem with ACA's U.S. Market Analysis to provide a fuller view of the domestic and international markets, the future depiction of industry, technology, and the competitive landscape. The new studies' chapter formats correspond and are similarly spaced for ease of comparing United States and global market performance.

This article examines the coating industry in the Asia Pacific (APAC) region—one of five regional segments detailed in the Global Market Analysis report.

ASIA PACIFIC REGION
The APAC region consists of 30 countries, the combined coatings production of which represents 33% of the volume and 37% of the value of the global coatings industry. Unlike other major coating-producing global regions, such as North America, Latin America, or the European Union (EU), no single country in the APAC region is wholly responsible for the region's output.

China, with roughly 60% of the region's output, has the largest market for coatings in volume terms, followed by India and Japan. With the exception of these three nations, APAC's coatings market is quite different from others. Of the more than 50 countries in this region, four represent more than 18% of the APAC region's total volume in both volume and value:

- China (31% of regional volume; 30% of regional value)
- India (18% of regional volume; 22% of regional value)
- Japan (9% of regional volume; 11% of regional value)
- South Korea (5% of regional volume; 8% of regional value)

Unlike the North American and European, global regions, value typically lags behind volume in APAC, perhaps due to the region's developing countries, which may have lower per capita incomes. For these reasons, the coatings market is usually more sensitive to changes in the global economy and economic development. Perhaps more to the point, the size, maturity, technology needs, and growth rates of each country's coatings market are quite different from others. Of the more than 50 countries in this region, four represent more than 18% of the region's total volume and value:

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<tr>
<th>Country</th>
<th>Regional Volume</th>
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</tr>
<tr>
<td>SOUTHEAST ASIA</td>
<td>Thailand, Indonesia, Singapore, Vietnam</td>
</tr>
<tr>
<td>MIDDLE EAST</td>
<td>Iran, Qatar, Turkey, Iraq</td>
</tr>
<tr>
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<td>Russia, Kazakhstan, Uzbekistan, Mongolia</td>
</tr>
<tr>
<td>EUROPE</td>
<td>Austria, Germany, Italy, France</td>
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</tbody>
</table>

Share: The ChemQuest Group, Inc.
Asia Pacific Coatings Region

Korea and Australia, value generally outpaces volume, which should not be a surprise, given their status as developed countries. Between the years 2013-2018, paints and coatings revenues for APAC grew from $56.2 billion to $12.2 billion representing 18.5 billion liters and 23.7 billion liters, respectively (Figures 1 and 2).

Wall talk practically says in the U.S. manufacturing industry about APAC, and the conversation will almost certainly include the word “China,” which the person to whom you are speaking is likely to express something other than indifference or deep detachment about “China.” The subject of North Korea and the issue of uncertainty, often emotion-laden responses, in which it is seen as either a friend or foe, or—especially among the larger, more
globalized corporations—as either a colleague or a competitor. For example, General Motors’ CEO Mary Barra correctly sees China as an exciting country in which to be producing cars and doing business—GM’s 27 plants, the Chinese market in the People’s Republic, produce and sell more cars than its 29 U.S. plants, and the profits that they generate come from Chinese sales and are used to run the Chinese plants. U.S. profits are not important in GM’s Chinese business, nor have any U.S. plants been “moved to China.” Although 30,000 Buick Enclaves were built in China and sold in the United States in 2018, this is such a small number (roughly 1% of GM’s total sales in the United States) that its impact on GM’s manufacturing businesses in the United States is negligible. On the other hand, a U.S. firm manufacturing and selling textiles, plastics or paper products seen not to see much an opportunity for expanding production into an indigenous Chinese market, 2.2 billion liters has, but rather a “blunt black” sucking business out of the United States and into China, with only minimal hope of ever reclaiming the lost production. Just as beauty is in the eye of the beholder, so too is the judgment of “goodness” or “badness” of Chinese manufacturing activity. Most readers of this article, however, are neither building homes nor weaving textiles—they are making, purchasing or selling raw materials for paints and coatings. For better or worse, how do we perceive China as we contemplate the future of our individual subsides of the U.S. paints and coatings industry?

Again, everything is relative to circumstance—time, place, economic conditions, cost of labor, cost of energy, availability of cargo shipping capacity and a host of other factors. One principal trauma, however, is that the U.S. paint and coatings industry is not generally vulnerable to imports of paints and coatings, due to the products’ shipping weight and the associated transportation costs. Very light paint is actually shipped into the United States, nor would we expect it to account for 4% of the value of the total U.S. paint industry based upon first or second-hand reports, and roughly 4% of that is from within North America.

The value true of paint being exported by the United States—there is not very much off-1.5-3% of total value, 70% of which is shipped with North America) primarily because the cost of transportation is simply too high. In general, this is a scenario that is repeated on a global basis, even in countries for which there are few or no foreign trade, commercial and the country’s own countries, per se, presents few barriers to commerce of paints and coatings. The majority of the first- and second- and third-world countries have their own paints and

coatings industry, and that industry’s production is typically used primarily within the country. Paint, therefore, is not typically exported from China. It is not uncommon, however, for consumer goods and durables goods to be manufactured in China, painted in China, and then exported to other parts of the world, or for articles or parts of articles, such as furniture components, to be shipped to China, painted, and returned to the country of origin. Cost of energy is cutting into this, but it has had quite an impact on certain U.S.-based and, since fine furniture, beginning in the early 1990s. Formulaically, some of this business has now moved from China to other countries within APAC because they have now become lower-cost producing areas.

For these reasons, the Chinese paints and coatings industry is most clearly observed, and most accurately and objectively portrayed if we study only the Market Industry which is composed of approximately 10,000 coatings manufacturers, concentrated in eastern, central and southern China, rather than concentrating on the wood, plastic, metal, and complete articles that Chinese industry paints and exports. China’s 10,000 or so coatings producers, the top 100 account for 50% of the volume, of which roughly 70% is OEM. (The top 1,000 producers account for 80% of sales) China has ~4,000 powder coatings producers, with small enterprises producing less than 1,000 liters of annual volume. Clearly, consolidation (which is already underway among the multinational and joint venture producers) will need to escalate, abetted by rising raw material costs and increasing regulatory requirements.

China’s overall portion of both value and volume for APAC centers on 60%, and its 2018 revenue constituted $44.5 billion of APAC’s total sales of $74.2 billion on sales of roughly 54.2 billion of APAC’s 23.7 billion liters (Figure 3).

Looking at these numbers on a global scale, this means that China’s 44.5 billion (CAP) represents approximately 28% of the global paints and coatings industry’s 1.4 billion liters represent 32% of global volume of 45 billion liters and its 1.4 billion liters, of which 32% of global volume represents 32% of global volume of 45 billion liters and its alkali-silicate system.

This all said, however, China is not synonymous with APAC, despite the presence of its paints and coatings Industry. It is easy, but never wise nor appropriate, to overlook the fact that 40% of paints produced in APAC do not emanate from China, and comprise a very significant volume of 9.6 billion liters valued at nearly $30 billion. The CAGR for the entire APAC region (2013-2018) was 5.1% (volume) and 5.7% (value), and projected growth for the period 2018-2023 is 4.6% (volume) and 5.3% (value). This suggests that value is slowly catching up to volume growth in the region’s under-developed countries.

MARKET DYNAMICS

In APAC, the largest slice of the coatings production pie is architectural coatings.
Korea and Australia, value generally outweighs volume, which should not be a surprise, given their status as developed countries. Between the years 2013-2018, paints and coatings revenues for APAC grew from $54.2 billion to $6.3 billion representing 18.5 billion liters and 23.7 billion liters, respectively (Figures 1 and 2). This growth is a reflection of the strong Asian economies, putting into question the traditional view of China as the dominant player. 

Globalization phenomena—either a colleague or a competitor. For example, General Motor’s CEO Mary Barra correctly sees China as an exciting country in which to be producing cars and doing business—GM’s 27 plants in China generate the Chinese market in the People’s Republic, produce and sell more than 29 U.S. plants, and that the profits that they generate come from China sales and are used to run the Chinese plants. China’s U.S. profits are not infrequent in GM’s Chinese business, nor have any U.S. plants been “moved to China.” Although 30,000 Buick Envoiions were built in China and sold in the United States in 2018, this is such a small number (roughly 1% of GM’s total sales in the United States) that its impact on GM’s manufacturing businesses in the United States is negligible. On the other hand, a U.S. firm manufacturing and selling textiles, plastics or paper products sees much more opportunity for expanding production into an indigenous Chinese market where it has 2.2 billion consumers, rather than a terrestrial “black hole” sucking business out of the United States and into China, with only minimal hope of ever reclaiming the lost production. Just as beauty is in the eye of the beholder, so too is the judgment of “goodness” or “badness” of Chinese manufacturing activity.

Most readers of this article, however, are neither building cars nor selling textiles—they are making, purchasing or paying for raw materials for paints and coatings. For better or worse, how do we perceive China as we contemplate the future of our individual subsegments of the U.S. paints and coatings industry? Again, everything is relative to circumstance: to time, place, economic conditions, cost of labor, cost of energy, availability of cargo shipping capacity and a host of other factors. One principal truism, however, is that the U.S. paint and coatings industry is not generally vulnerable to imports of paints and coatings, due to the products’ shipping weight and the associated transportation costs. Very little paint is actually shipped into the United States, and most would be expected to be 4% of the value of the total U.S. paint industry, based upon first 18 million liters so as to 14% of U.S. paints and coatings industry, based upon first 18 million liters so as to 14% of U.S. paints and coatings revenue. The same is true of paint being exported by the United States—there is not very much off to 5-9% of total value, 70% of which is shipped within North America) primarily because the cost of transportation is simply too high. In general, this is a scenario to be repeated on a global basis, even in regions where the discussion is on a country-by-country basis, per se, presenting few barriers to commerce of paints and coatings. The major exception in the first and second world countries have their own paint industry, and joint venture producers) need to escalate, abetted by rising raw material and increasing regulatory requirements.

China’s overall production of both value and volume for APAC centers on China, and its 2018 revenue constituted $4.5 billion of APAC’s total sales of $74.2 billion on sales of roughly 14.3 million liters of APAC’s 23.7 billion liters (Figure 2). Looking at these numbers on a global scale, this means that China’s 4.4 billion represents approximately 28% of the global paints and coatings industry’s 12.13 billion value, and its 14.4 billion liters represent 32% of global volume of 45 billion liters. For APAC, China’s 0.1% of total APAC’s 18.5 billion liters valued at nearly $30 billion. The CAGR for the entire APAC region (2013-2018) was 5.3% (volume) and 5.7% (value), and projected growth for the period 2018-2023F is 4.4% (volume) and 5.3% (value). This suggests that value is slowly catching up to volume growth in the region’s under-developed countries.

Market dynamics: In APAC, the largest slice of the coatings production pie is architectural coatings, joint venture producers) need to escalate, abetted by rising raw material and increasing regulatory requirements.

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Asia Pacific Coatings Region

which represents 43% of total volume in the region. This makes sense, because this is a relatively underdeveloped area of the world with a significantly expanding middle class that is seeking to improve the design and appearance of their homes. Architectural paint is a relatively low-cost means for adding interest value to both the interior and exterior of their homes, whether individual houses or multifamily dwellings. The architectural segment is followed by general industrial finishes, at 15% of volume, and then by nine other, much smaller, segments that parallel similar classifications in other regions of the world (see Figure 6).

APAC is part of the global economy, and even though the paint and coatings industry still has many regional and local elements in its makeup, it is strongly impacted by global economic conditions, because there is a strong correlation between GDP per capita and paint and coatings consumption per capita. Just as the global paints and coatings industry was deeply affected by the Great Recession of 2008-09, which was ultimately caused by chaos in the U.S. mortgage market, so too can it be affected by other economic situations, occasionally predictable but typically unexpected, that might arise elsewhere within the global economy. For the past five years, advanced economies (United States, Euro Area, Japan, China) have experienced a continued recovery from the Great Recession, and GDP for these countries was projected to grow during 2019, albeit at lower rates than in 2018:
- U.S. forecast: +2.6%, down from 2.9% in 2018.
- Europe and Central Asia (forecast: +1.6%, down from 3.2% in 2018).
- China forecast: +6.3%, down from 6.6% in 2018.

Between 2018-2023, China's paint and coatings production, with a CAGR of 4.0% (volume) and 5.2% (value), is expected to grow at a very slightly slower rate than APAC as a whole, which is 4.4% in volume (year) and 5.3% in year value. China's coatings sector is also growing more slowly than GDP expectations for this region (see Figures 5 and 6).

MARKET TRENDS AND DRIVERS

Overall regional sales are strongly influenced by government subsidies, construction activity, automotive production, general industrial production, interest rates and consumer spending, all of which are important components of GDP—and coating demand in APAC tends to follow GDP growth, perhaps even more closely than in the other global regions. With the largest agricultural and construction markets in APAC, China is particularly vulnerable to these market forces. Paced, for example, with declining car sales (expected to be down 12% in 2019 from 2018), China is making financing more accessible to boost sales, but Chinese consumers still rely less on financing than developed markets, so 0% to -5% or 0% to -7% others, on average. China's slowing economy, coupled with high service prices, is also likely to lower demand for architectural coatings.

In response, China is reducing its focus on manufacturing to drive the transition to a service-driven economy. This will take many years, of course, and because APAC (notably China) is a manufacturing leader across many sectors, including auto, appliances, trucks, bikes, brown goods, electronics and rail, the overall effect may not be a sudden or jolting one. As manufacturing in China undergoes a slight decline, it will be picked up by other nations within APAC, where changing demographics are positive for coatings growth—growing middle classes are creating demand for greater use of coatings, and also requiring that the coatings be both higher quality and be based upon higher-performing technology. Rapid urbanization and more stable economies throughout APAC are stimulating the increase in home supply stores, particularly in Indonesia. However, the DIY market is small in emerging countries, notably China and India, because labor to apply paint is both readily available and relatively inexpensive. In contrast, Japan has labor shortages due to its aging population, and is, therefore, more focused on productivity and efficiency gains to help sustain its coatings industry. APAC has maintained its global coatings leadership position for two important reasons:
- It is a leading manufacturer of coating goods for countries throughout the world, particularly the United States and western Europe;
- It is responding to increased domestic consumption as its component countries raise their standards of living.

For many products, end-use trade patterns have the most influence on the coating market. In general, coatings tend to be manufactured and applied in the region in which the end-use product is fabricated, with the exception of architectural and auto refinishing coatings, which are produced in the same region where they are produced. Tariffs and trade agreements are impacting some trade patterns, and EU's antidumping policies have reduced its volume of Chinese-coated imports. The 2010 EU-Japan trade deal will result in fewer Japanese car exports to Europe over the coming 10 years, and escalating trade tensions between the United States and China have had negative repercussions throughout the world. Vietnam has been the largest beneficiary of divested trade, followed by Taiwan, Chile, Malaysia, Argentina, Brazil, Singapore, South Korea, Hong Kong, France, Mexico and Canada. China's direct investments have boosted other economies, most notably in Latin America.

TECHNOLOGY OVERVIEW IN APAC

Although choice of polymer technology varies by end-use market segment and—at least to a certain extent—the country in which the coatings are to be used, it is clear that APAC, overall, is shifting away from conventional solventborne coatings to high solids, waterborne, powder coatings and energy-cure systems. There are many reasons for this, but a tightening regulatory environment, especially in China, and technology advances that enable the production of "greener" products are certainly among the most important drivers, and it may be because of their "green" component that China is the largest global market for all types of paints and coatings. The use of waterborne coatings (not VOCs or HAPs) in any countries has been in place, especially in China, for more than two decades, and has been used for many product parts in general industries, appliance, fusion-bonded epoxy for pipelines, extruded aluminum for building construction and automotive underhood parts. We anticipate that the next major end-use for which China is expected to switch to powder coatings will be sheet parts for construction machinery.

According to industry estimates, over 50 UV-cure coatings manufacturers—including Changhua (one of the largest), Huilong Paint and Carplo—are based in China. UV-cure coatings are predominantly used for wooden and plastic end-uses, although Shanghai PhilChem Material Co., Ltd., is the third largest global supplier for UV-curable coatings used on optical fiber that must meet stringent requirements for mechanical micromobiling and optical refractive index characteristics for optical fiber coatings (see Figure 7).

Environmental regulations are expected to become more stringent throughout APAC, due to rising environmental awareness, particularly in China where, contrary to many commentators' opinions, the government is profoundly

Source: The DuPont Group, Inc.
Asia Pacific Coatings Region

which represents 43% of total volume in the region. This makes sense, because this is a relatively underdeveloped area of the world with a significantly expanding middle class that is seeking to improve the design and appearance of their homes. Architectural paint is a relatively low-cost means for adding instant value to both the interior and exterior of their homes, whether individual houses or multifamily dwellings. The architectural segment is followed by general industrial finishes, at 18% of volume, and then by nine other, much smaller, segments that parallel similar classifications in other regions of the world (see Figure 4).

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**TECHNOLOGY OVERVIEW IN APAC**

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According to industry estimates, over 30 UV-cure coatings manufacturers—including Changmu (one of the largest), Huiling Paint and Carly—are based in China. UV-cure coatings are predominantly used for wood and plastic end-uses, although Shanghai Pilicmehl Materials Co., Ltd., is the third largest global supplier for UV-curable coatings used on optical fiber that must meet the stringent requirements for mechanical microwobening and optical refractive index characteristics for optical fiber coatings (see Figure 7). Environmental regulations are expected to become more stringent throughout APAC, due to rising environmental awareness, particularly in China where, contrary to many commentators' opinions, the government is profoundly
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serious with regards to providing a cleaner environment for its citizens. China’s environmental regulations and compliance requirements are becoming stricter to combat air quality issues, resulting in a changing coating supplier base, as manufacturers decide whether to move plants or simply close them. Government quotas require carmakers to sell a certain percentage of hybrid and all-electric vehicles or face fines. Formaldehyde content is another area of significant concern for Chinese regulators, who are concerned about studies that have conclusively shown that formaldehyde levels in certain housing components significantly exceed national standards, which are comparative with similar standards in other global regions. While the Chinese government is not always favorable to accepting requests and/or suggestions for change from other governments around the globe, it must change hands as a major exporter, and pay close attention to global market trends and requirements, including sustainability trends from coatings end-users. Such trends are influencing product designs and buying trends on a global basis, which, in turn, impact global and APAF changes in coating preferences, technology development, and potentially even volume demand. Consumer focus, especially by Asian millennials, is on product quality, less packaging, minimalism, benefits, etc. Digitalization, as more of the world goes “online,” is bringing awareness of social concerns (climate change, global “throw away” culture, the effects of non-biodegradable plastics), on the environment, demands for more energy-efficient/ lower carbon footprint for public transit systems; electric vehicles; “green buildings” and a host of other topics not always welcomed by the authorities and potential for innovative solutions while helping China to expand its access to global markets. As the middle class grows and becomes more consolidated in various APAF countries, per capita usage of paint is going to increase substantially, and outstrip many other elements of GDP. Looking ahead with respect to APAF’s paint and coatings industry, we expect to see the industry outperform GDP, despite the established relationship that it has with GDP in the developed countries of the world (see Figures 8 and 9). By 2024, we forecast paint demand in APAF at 26.5 billion liters valued at $400 billion. APAF will continue to produce and use more solventborne coatings than North America or Europe, but it will be steadily switching these systems to “compliant,” “sustainable,” and “green” systems. This will occur despite the trend in China to move from a manufacturing-driven to a service-driven economy, because many other countries in APAF are still in a growing manufacturing mode and are beginning to compete with China as manufacturing hubs—and because, even as its coatings manufacturing sector becomes more mature, the sheer size of that sector will remain a major factor in the global paint and coatings market. Finally, it must always be kept in mind that, in most countries within APAF, per capita demand for paints and coatings is still a significant factor for growth—even China, with a per capita demand of 10.2 liters/person is well short of South Korea’s per capita demand of 19 liters/person, and overall APAF is running at only 5.0 liters/person; so significant expansion in the production of paints and coatings in the future is an extremely safe bet. APAF is a dynamic, strong and formidable factor in the global coatings community—geography, demographics, economic factors, and the opportunity for considerable consolidation talk together to assure it remains so for both the near- and long-term future.

Source: The Chemical Group, Inc.

FIGURE B—APAF coatings industry CAGR, based upon volume and rate (2018–2028)

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