

# Vinyl Surface Coatings

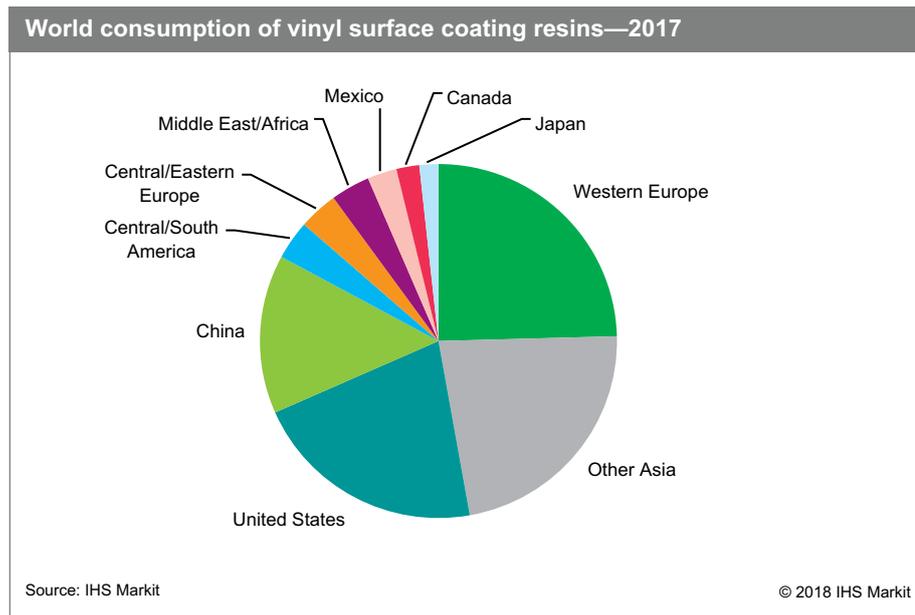
15 June 2018

## Abstract

Vinyl surface coatings are based primarily on vinyl acetate-based latexes used in architectural coatings, and also on solvent-based copolymers of vinyl acetate and vinyl chloride. The latexes are used mainly to make architectural (decorative) coatings. Consumption grows in line with construction activity. The North American, Western European, and Japanese construction markets are expected to remain flat during 2017–22, while the Chinese market should grow at 5–6% per year. Higher rates are expected in Central and Eastern Europe, the Middle East, and other regions in Asia Pacific. Overall growth will be around 2.7% annually.

As of mid-2018, the global industry has been dealing with increasing vinyl acetate monomer prices, which rose steadily through 2017. In the North American architectural coatings market, there is continuing consolidation of producers, resulting in rising price pressure on all suppliers of raw materials like latexes. In addition, larger coatings producers continue to consolidate manufacturing facilities so distribution capabilities have become a more important factor. In Europe, producers must deal with REACH legislation, which is expected to curtail use of certain biocides used with vinyl acetate–ethylene emulsions.

The following pie chart shows world consumption of vinyl surface coating resins:



During 2010–17, architectural coatings grew 3–4% per year on average in the United States. However, consumption of vinyl resins was somewhat lower because of competition from acrylic resins, especially in the do-it-yourself market. Legislation in California and the northeastern United States, and the influence of the US Green Building Council's

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Leadership in Energy and Environmental Design (LEED) Green Building Rating System have motivated coatings manufacturers to sell architectural coatings with very low levels of volatile organic compounds (VOCs). As a result, consumption of vinyl acetate–ethylene (VAE) emulsions, which can be formulated to produce coatings with little or no VOC, has grown strongly. However, copolymers of vinyl acetate and butyl acrylate (“vinyl acrylates”) remain the workhorses of the latex market because of their favorable performance/cost properties, which are especially valued by professional contractors for the nonresidential paint market.

In Western Europe, the construction market started growing again in 2015–17 after a long decline. Consumption of architectural coatings is expected to grow at a rate of 1.5–2% per year for the next five years. VAEs are expected to grow faster than the overall architectural coatings market, especially in the interior drywall and masonry sectors. VAEs are well accepted in Germany and northern Europe as they meet the requirements of the Blue Angel program, which strongly encourages the use of low-VOC construction materials. Demand for other types of vinyl coatings for architecture, namely vinyl acrylics and vinyl versatates, are expected to increase at a lower rate. Demand for PVC solution and plastisol (paste) coatings will decrease. Demand for all vinyl coatings in Western Europe will increase at 1.4% per year during 2017–22.

Demand for vinyl coatings in Japan is small, as coatings are not used often in interior architectural applications, and high-durability exterior coatings (mainly acrylic copolymers with silicone or urethane) are preferred.

Overall consumption of vinyl acetate–based emulsions in China is expected to continue to increase by about 6% annually as higher-performing water-based paints replace lesser-performing coatings. Production of coatings based on polyvinyl alcohol will likely continue to decrease because of lower performance. Paints based on polyvinyl formal will likely decline because of their propensity to release formaldehyde. Western companies have built plants to make high-quality vinyl resins and associated raw materials, such as Hexion, Wacker, and Celanese.

Overall consumption of vinyl coatings in Asia outside of Japan and China is expected to increase at a rate of about 5% annually along with increasing demand for environmentally friendly coatings for the growing construction market. In India, vinyl acrylate coatings are expected to continue in the low-performance distemper paints, which are used on inside surfaces that have been plastered or wallpapered.

# Contents

<b>Executive summary</b>	<b>4</b>
<b>Summary</b>	<b>5</b>
<b>Introduction</b>	<b>7</b>
<b>Manufacturing processes</b>	<b>9</b>
Resin preparation	9
– Vinyl acetate homopolymers and copolymer latexes	9
– Derivatives of polyvinyl acetate	10
– Vinyl chloride homopolymers and copolymers	10
Coating formulation	12
– Waterborne (latex) paints	12
– Solvent-based coatings	12
– Dispersion resins (plastisols and organosols)	12
– Powder coatings	13
<b>Environmental issues</b>	<b>14</b>
<b>Supply and demand by region</b>	<b>16</b>
United States	16
– Producing companies	16
– Vinyl acetate-based coating resins	16
– Polyvinyl acetate derivative coating resins	17
– Polyvinyl chloride coating resins	18
– Production	18
– Consumption	18
– Architectural coatings	20
– Interior	25
– Exterior	27
– Industrial finishes	27
– Containers and closures	27
– Coil coatings	28
– Factory-finished wood	28
– Automotive OEM	28
– Anticorrosion	28
– General industrial	29
– Price	30
– Trade	31
Canada	33
Mexico	33
Central and South America	34
Western Europe	36
– Producing companies	36
– Production	38
– Consumption	39
– Architectural coatings	39
– Industrial finishes	42
– Anticorrosion/marine	42
– Container coatings	43

– Coil coatings	43
– Automotive	44
– Powder coating	44
– Wood coatings	44
– Barrier coatings	45
– Other	45
– Price	45
– Trade	47
Central and Eastern Europe	47
Middle East	49
Japan	51
– Producing companies	51
– Vinyl acetate–based coating resins	51
– Polyvinyl acetate derivative coating resins	52
– Polyvinyl chloride (PVC) coating resins	52
– Coating formulators	53
– Production	53
– Consumption	55
– Architectural coatings	56
– Industrial finishes and other	57
– Price	58
– Trade	58
China	58
– Producing companies	58
– Production	61
– Consumption	62
– Price	63
– Trade	63
Other Asia	64
– Producing companies	64
– Consumption	67
<b>Bibliography</b>	<b>70</b>
<b>Revisions</b>	<b>71</b>

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