

# Styrene-Butadiene Latexes

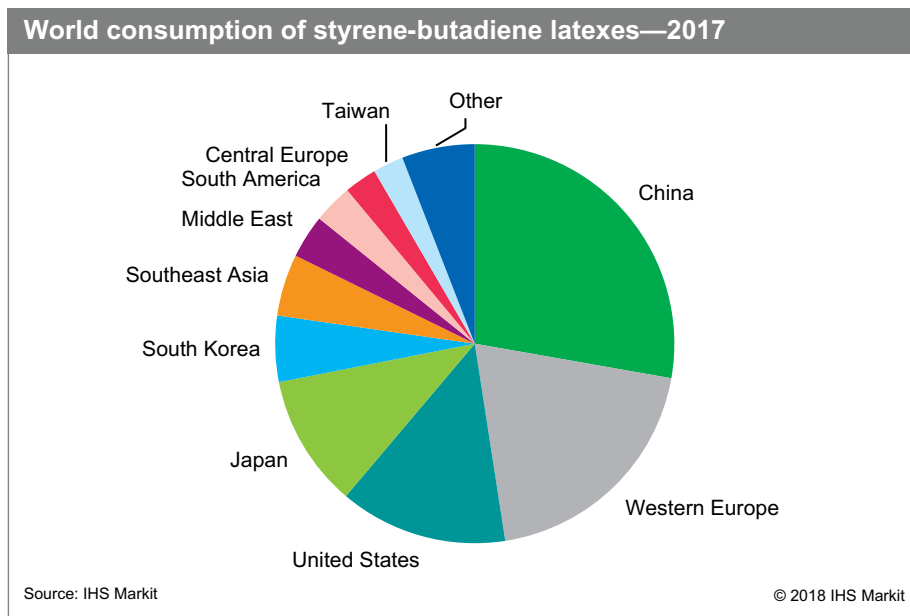
31 August 2018

## Abstract

In the last decade, North America and Western Europe have shut down a significant amount of SB/SBR latex capacity following a decline in demand (especially for the coated paper and carpet industries). North American capacity has declined by close to 49% and Western Europe has lost 32% of its capacity in the last decade. The markets in Japan and Other Asia (excluding China) have been flat to declining as well during the same period. The exception is China, which has seen capacity expansion to meet demand for SB latex end-use applications. As a result of a growing middle class, improved standard of living, and adoption of global consumer brands, capacity and production quantities are currently ramping up in China. However, in the next five years, Chinese demand and capacity will grow at a much slower rate.

This report mainly covers supply/demand for styrene-butadiene latexes (SB latex and SBR latex), which are classified based on styrene content. SB latexes contain at least 45–80% styrene, and SBR latexes contain less than 45% styrene. In industry, SB latexes are most widely used for coated/pigmented paper and paperboard coatings and carpet backcoatings and accounted for a vast majority of worldwide styrene-butadiene latex consumption in 2016. The remaining consumption is for SBR latexes, which are used mostly for molded foams and adhesives. Styrene-butadiene-vinylpyridine terpolymers, which are used almost exclusively for tire cord treatments, represent a minimal portion.

The following pie chart shows world consumption of SB latex:



The production of SB latex is highly fragmented worldwide. More than 50 producers globally, with two market leaders—Trinseo and BASF—together control more than 25% of the market. Because of the fragmentation and low overall growth

## Contacts

**Koon-Ling Ring** • [Koon-Ling.ring@ihsmarkit.com](mailto:Koon-Ling.ring@ihsmarkit.com)  
**Maria deGuzman** • [Maria.deguzman@ihsmarkit.com](mailto:Maria.deguzman@ihsmarkit.com)

in the market, it is possible to expect a further rationalization of the supply structure, including more capacity rationalization (including unit closures).

Consumption of SB/SBR latexes is forecast to grow at about 1% per year from 2017 to 2022, in part because of the following:

- The impact of digitalization on paper production and movement to carpet flooring alternatives.
- Growing imports of coated papers into traditional producing regions (Western Europe and North America).
- Coated paper mill closures and general reduction(s) in production.

In paper coatings applications, SB latex has better properties than other materials, especially for wet applications such as paper drink carriers. But in other applications SB latex has competition from butyl acrylate-based systems, and also from the increasing starch content in more conventional paper grades. Bio-based latex has shown only small penetration so far, and is not expected to have a significant impact.

The largest application for SB latex is paper coatings. Carboxylated SB latex is the dominant synthetic pigment binder for coated papers. SB latex-based coating systems offer high coating speed, and enhanced pigment binding power that results in smoothness, higher gloss level, brightness, opacity, and water resistance at lower cost than the alternatives. A majority of SB latex binders are used on coated printing papers such as magazines, annual reports, label stock, advertising flyers, and catalogs. The remainder is used for coating paperboard products (commercially produced coated paperboard) such as folding cartons for food packaging uses. SB latex improves brightness uniformity as well as print performance. In addition, it optimizes glueability, stiffness, and scoring, and enhances ink and varnish performance.

SB latexes are also used in paper saturation for the production of specialty papers and board to obtain resistance to grease or petroleum, or to improve strength at high temperatures. Saturated specialty papers and board are used for book covers, gaskets, containers, masking tape, and various sandpapers.

The second major outlet for SB latex is in backcoatings for tufted carpets. Latex backcoatings hold the tufts in place, anchoring the pile fibers, providing improved stability and resistance to fraying or tuft loss at the cut edges of the carpets. The latex functions as the laminating adhesive for a secondary backing (primarily polypropylene), but it can also function as the actual backing on some carpets (so-called unitary back carpets). The styrene content in SB latexes varies depending on the physical features desired in the final product. Over 90% of carpets produced in the United States are tufted, and most of the carpet industry is concentrated in the southeastern states, primarily in Georgia. Accordingly, several SB latex plants are located in that region. In Western Europe, Belgium is the center of the carpet industry, followed by the Netherlands.

# Contents

<b>Executive summary</b>	<b>4</b>
<b>Summary</b>	<b>5</b>
Producing companies	5
Salient statistics	5
Consumption	7
Trade	8
<b>Introduction</b>	<b>10</b>
<b>Manufacturing processes</b>	<b>11</b>
<b>End-use applications</b>	<b>13</b>
Paper coating and paperboard coating	13
Carpet backcoating	13
Nonwoven binders	14
Upholstery and other backcoating	14
Foams	14
Building and construction	14
Asphalt modification	14
Adhesives	15
Plastics modification	15
Tire cord treatment	15
Other applications	15
<b>Supply and demand by region</b>	<b>16</b>
North America	16
– United States	17
– Producing companies	17
– Salient statistics	18
– Consumption	18
– Trade	20
– Canada	20
– Producing companies	20
– Salient statistics	20
– Consumption	21
– Mexico	22
– Producing companies	22
– Salient statistics	22
– Consumption	22
South America	23
– Producing companies	23
– Salient statistics	23
– Consumption	24
– Trade	25
Western Europe	25
– Producing companies	25
– Salient statistics	26
– Consumption	27
– Trade	28

Central Europe	28
– Producing companies	28
– Salient statistics	28
– Trade	29
CIS and Baltic States	29
– Producing companies	29
– Salient statistics	29
Middle East and Africa	30
– Producing companies	30
– Salient statistics	31
Indian Subcontinent	32
Northeast Asia	33
– China	35
– Producing companies	35
– Salient statistics	37
– Consumption	37
– Trade	39
– Japan	39
– Producing companies	39
– Salient statistics	40
– Consumption	41
– Trade	42
– South Korea	42
– Producing companies	42
– Salient statistics	43
– Taiwan	44
– Producing companies	44
– Salient statistics	44
Southeast Asia	45
– Producing companies	45
– Salient statistics	45
<b>Appendix—Compounding</b>	<b>48</b>
<b>Additional resources</b>	<b>50</b>
<b>Revisions</b>	<b>51</b>

## IHS Markit Customer Care

CustomerCare@ihsmarkit.com

Americas: +1 800 IHS CARE (+1 800 447 2273)

Europe, Middle East, and Africa: +44 (0) 1344 328 300

Asia and the Pacific Rim: +604 291 3600

---

### Disclaimer

The information contained in this report is confidential. Any unauthorized use, disclosure, reproduction, or dissemination, in full or in part, in any media or by any means, without the prior written permission of IHS Markit Ltd. or any of its affiliates ("IHS Markit") is strictly prohibited. IHS Markit owns all IHS Markit logos and trade names contained in this report that are subject to license. Opinions, statements, estimates, and projections in this report (including other media) are solely those of the individual author(s) at the time of writing and do not necessarily reflect the opinions of IHS Markit. Neither IHS Markit nor the author(s) has any obligation to update this report in the event that any content, opinion, statement, estimate, or projection (collectively, "information") changes or subsequently becomes inaccurate. IHS Markit makes no warranty, expressed or implied, as to the accuracy, completeness, or timeliness of any information in this report, and shall not in any way be liable to any recipient for any inaccuracies or omissions. Without limiting the foregoing, IHS Markit shall have no liability whatsoever to any recipient, whether in contract, in tort (including negligence), under warranty, under statute or otherwise, in respect of any loss or damage suffered by any recipient as a result of or in connection with any information provided, or any course of action determined, by it or any third party, whether or not based on any information provided. The inclusion of a link to an external website by IHS Markit should not be understood to be an endorsement of that website or the site's owners (or their products/services). IHS Markit is not responsible for either the content or output of external websites. Copyright © 2018, IHS Markit™. All rights reserved and all intellectual property rights are retained by IHS Markit.

