

Amino Resins

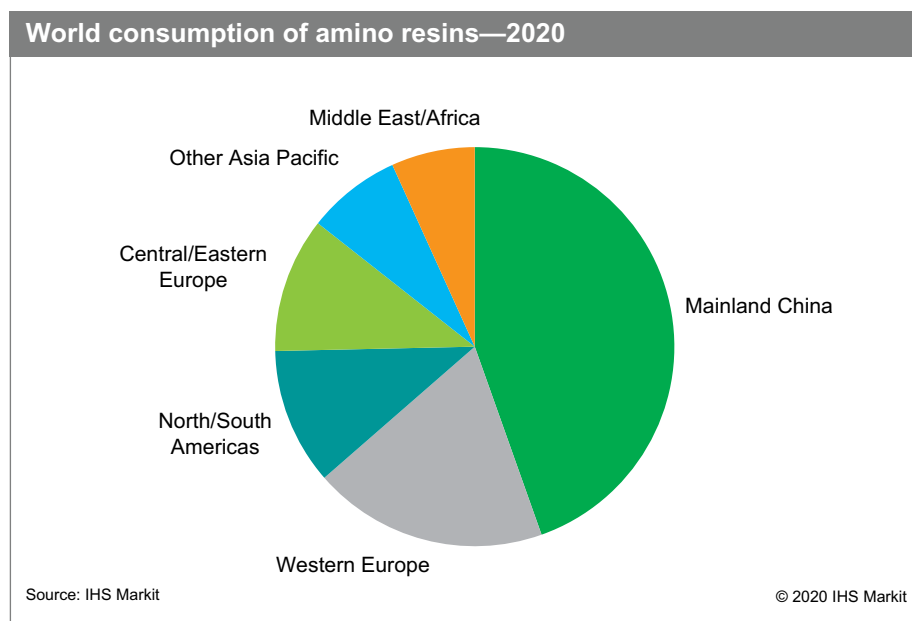
30 September 2020

Abstract

There are two types of amino resins: urea-formaldehyde (UF) and melamine-formaldehyde (MF). Both are used mainly as adhesives in the wood paneling industry for products such as particleboard, plywood, and medium-density fiberboard (MDF). They are produced by numerous companies worldwide, as the technologies are well known requiring low capital investments. Larger producers have multiple locations to serve the local customers; long transport is uneconomical because the adhesives are shipped in water solution. .

In 2020, the largest consumer was mainland China, accounting for nearly half of total amino resin consumption. Growth has been strong in mainland China as the result of a greater output of panels for furniture and other goods used in interior applications. Other regions that are experiencing high growth rates are Central and Eastern Europe, the Middle East, and the Indian Subcontinent, driven by increasing domestic demand and higher exports.

The following pie chart shows world consumption of amino resins:



Urea resins have historically been the resin of choice for making interior panels for goods like case goods, cabinets, countertops, doors, furniture, and fixtures that are used in interior environments. Adhesives based on UF resins are inexpensive, cure quickly, and produce boards with smooth finishes that are easy to machine, paint, and laminate. However, UF resins are prone to off-gas fugitive emissions of formaldehyde that cause toxicity concerns. Many board producers now use modified UF resins, phenol-formaldehyde and melamine-formaldehyde resins (which do not off-gas

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formaldehyde), or nonformaldehyde competing products to meet governmental regulations on formaldehyde emissions (such as CARB Phase 2 in the United States, E1/E2 in Western Europe, and Japan Agricultural Standards [JAS] in Japan).

MF resins provide bonding superior to UF resins and are used in applications that are exposed to moisture, such as laminates for flooring. MF adhesives are also less prone to breakdown than UF, and thus do not present formaldehyde off-gassing concerns. However, their prices are considerably above those for UF. In surface coatings, MF resins are preferred to UF resins as curing agents for acrylic, polyester, and other resins as they produce coatings with superior properties for application to automobiles, appliances, and other high-valued durables.

The COVID-19 pandemic and the resulting government-ordered lockdowns have led to a profound recession impacting virtually every region of the world in 2020; the already slowing construction markets were especially hard hit, impacting consumption and production of wood panels and furniture, and thus, demand for amino resins. Amino resin demand declined by 5–6% in 2020 from 2019 levels, with recovery expected at 2–3% annually through 2025.

For more detailed information, see the table of contents, shown below.

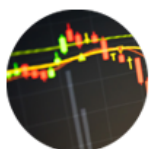
IHS Markit's Chemical Economics Handbook – Amino Resins is the comprehensive and trusted guide for anyone seeking information on this industry. This latest report details global and regional information, including



Global summary;
regional coverage



Producers with
annual capacities
and plant sites



Production figures
and trends



Consumption and
forecasts by end use
application



Manufacturing
processes and
environmental issues



Trade – imports
and exports

Key benefits

IHS Markit's Chemical Economics Handbook – Amino Resins has been compiled using primary interviews with key suppliers and organizations, and leading representatives from the industry in combination with IHS Markit's unparalleled access to upstream and downstream market intelligence and expert insights into industry dynamics, trade, and economics.

This report can help you

- Identify trends and driving forces influencing chemical markets
- Forecast and plan for future demand
- Understand the impact of competing materials
- Identify and evaluate potential customers and competitors
- Evaluate producers
- Track changing prices and trade movements
- Analyze the impact of feedstocks, regulations, and other factors on chemical profitability

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