

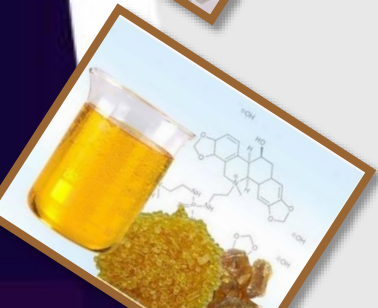
Phenolic Resins

Production Business.

Phenol-Formaldehyde

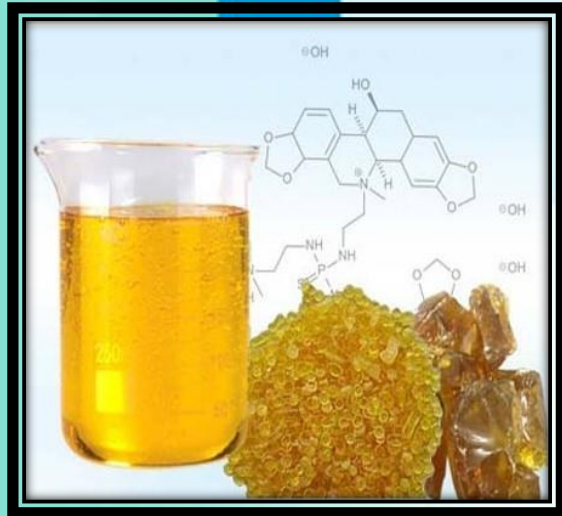
Resins Manufacturing

Industry



Introduction

Phenolic resins or phenol-formaldehyde resins are the synthetic polymers obtained by the polymerization of phenol and formaldehyde. Phenolic resins possess good physical and chemical properties such as high mechanical strength, low toxicity, good heat resistance, low smoke formation and high thermal stability.



Due to such high properties, phenolic resins find their applications in myriad industrial products. From molded products such as billiard balls to coatings and adhesives, phenolic resins are used for different applications across various industries such as automotive, electrical & electronics, construction etc. Besides, by mixing phenolic resins with other polymer, they can also be used in applications like corrosion coating, adhesive, etc.



Uses or Application:

Phenol formaldehyde have so many uses in different industry. Phenolic resins are mainly used in the circuit board production that is for making circuit board like PCB. In Electrical equipment also it is needed, caps, handles, buttons, radio cabinets, furniture, knobs, vacuum cleaner, cameras, ash trays, engine ignition equipment. It is also used in Laminated Material like Laminated sheets, rods and tubes are made in great variety from fabric, paper, wood veneers etc. impregnated with phenolic, resins providing a range of materials of widely differing properties.

Phenol Resins are also used for moulding objects which can be insulating and heat-resistant.

In that case various fillers are added such as fabric, fibres and flakes. Some uses are heat resistant appliance handles, distributor caps and brake linings. Snooker balls and circuit boards are other phenolic resin products.

Besides being used in coatings for interiors of food and beverage cans, phenolic resins are an excellent choice for manufacturing protective coatings and for enhancing the performance of epoxy, acrylic, polyester and alkyd based adhesive or coating products. They are, for example, used for tank, drum, and pipe linings; marine and industrial applications; and electrical devices such as wires, motor and wound coils.

Market Outlook

The global phenolic resins market size was valued at USD 11.17 billion in 2018 and is expected to expand at a CAGR of 5.3% over the forecast period, 2019 to 2025. Phenol-Formaldehyde is the scientific name for phenolic resin and being a thermosetting plastic finds growing use in wide choice of applications. The uses vary from molding compounds, forest products and abrasives that comprises the major applications for phenolic resins.

Construction, automotive, furniture and electrical & electronics industry are the major end-use sectors for phenolic resins. The holistic growth in these industries is expected to drive the demand for phenolic resins in the global market.

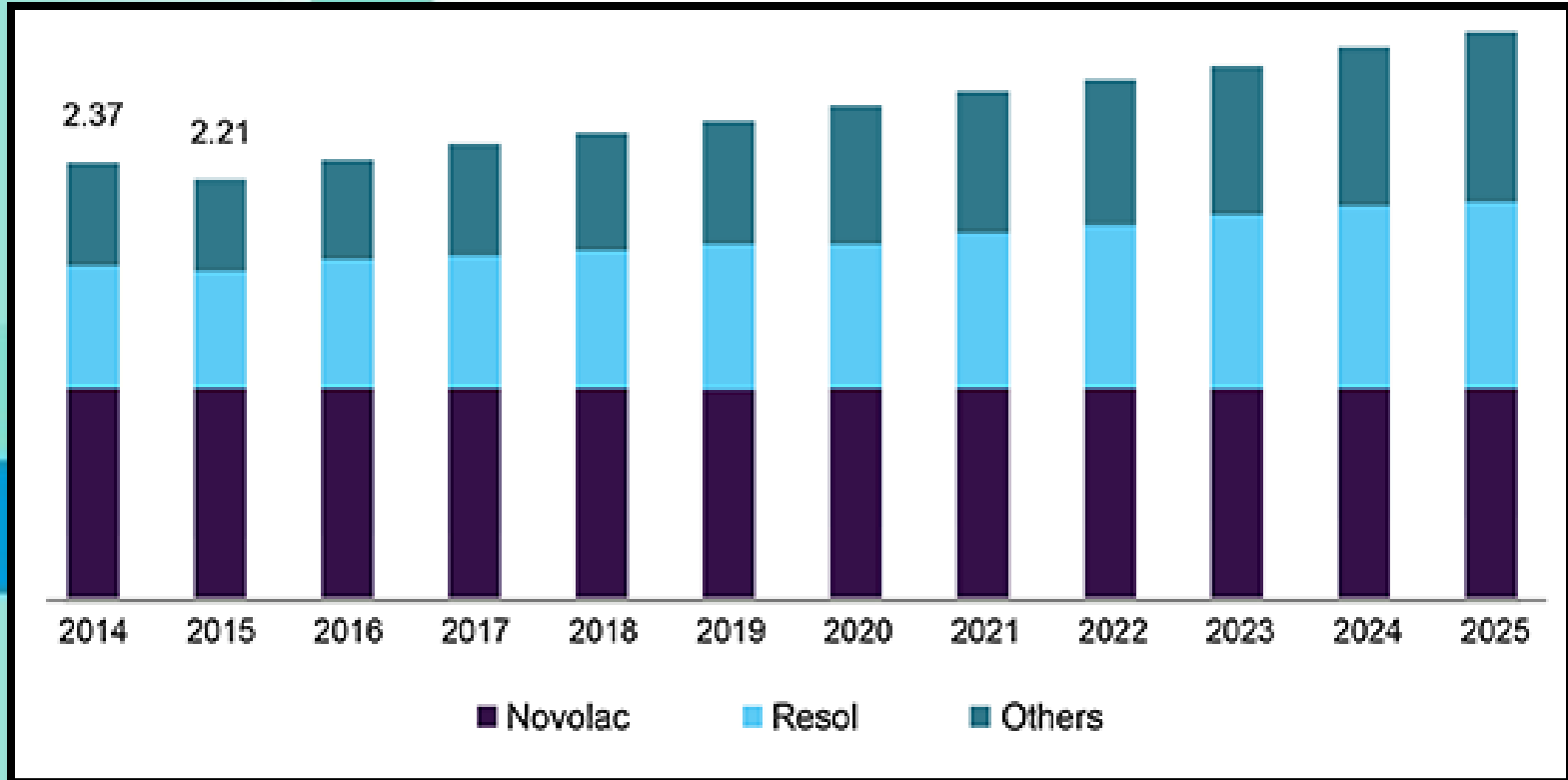


Phenolic resins find their huge application in different wood products, which is majorly driven by the construction industry growth.

Based on the end-user type, the market is categorized as automotive, building & construction, furniture, electrical & electronics, industrial, and others. The automotive industry currently dominates the market and is expected to maintain its dominance over the next five years as well, owing to consistently increasing production of vehicles along with an increasing number of phenolic resin applications, such as brake linings, clutch facing, and brake pads.



U.S. Phenolic Resin Market Size, By Product, 2019-2025 (USD Billion)



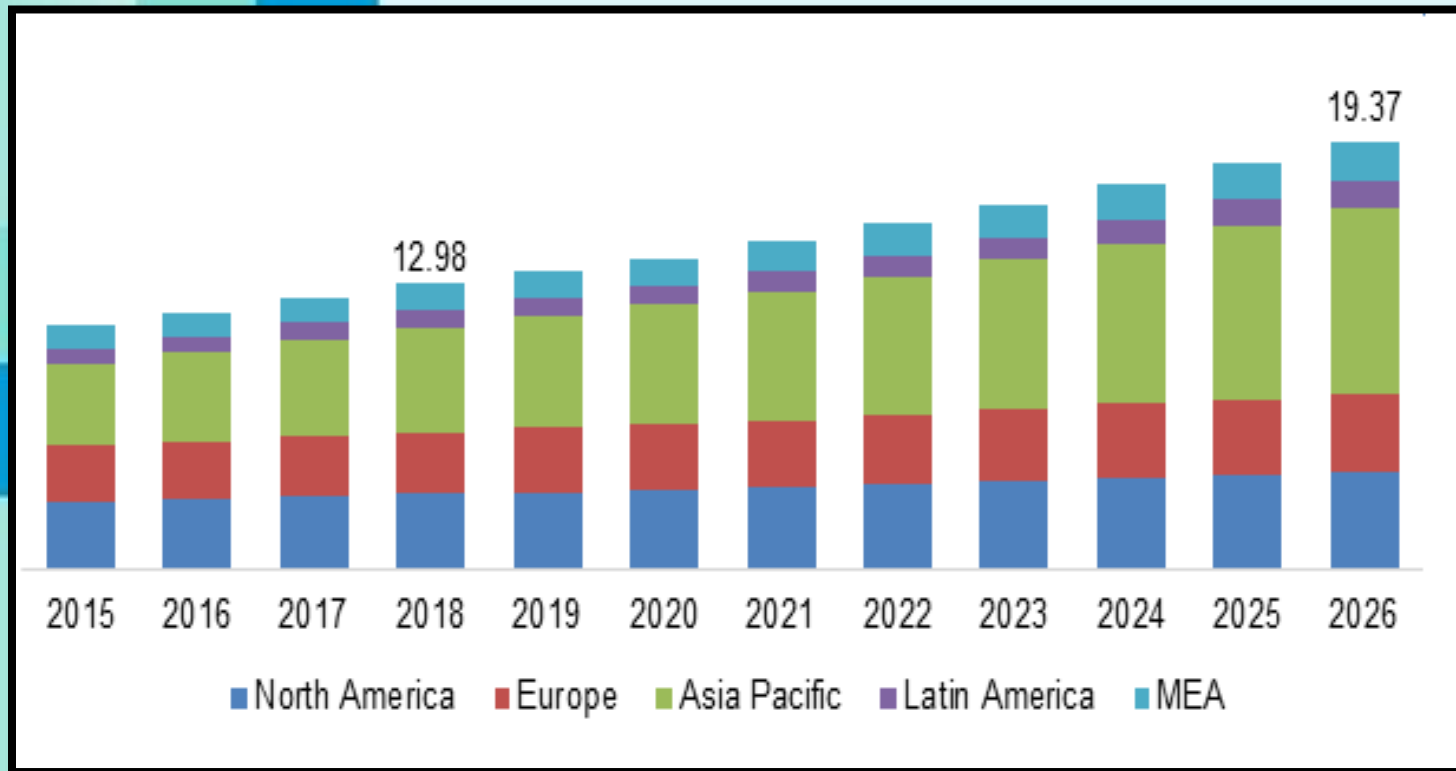
Based on the resin type, the market is segmented as resol resin, novolac resin, and others. Resol resin currently dominates the phenolic resin market, owing to its widespread usage in the wood adhesive application. Further, the resin type is also expected to witness the highest growth during the forecast period, owing to its excellent properties including superior heat resistance, high flexibility, mechanical strength, moldability, and excellent friction properties.



Phenolic resins are primarily made from synthetic polymers which are opposed by the governing bodies in most part of the world. This is because the polymers pose a serious threat to the wildlife and environment. The stringent environmental regulations regarding the usage of plastic for commercial application is estimated to restrict the growth of global phenolic resins market throughout the forecast period. Nevertheless, the rising need for fuel-efficient and lightweight vehicles and the increasing adoption of nanotechnology are expected to offer promising growth opportunities for the market players.



Phenolic Resin Market Revenue, By Region, 2015-2026 (USD Billion)

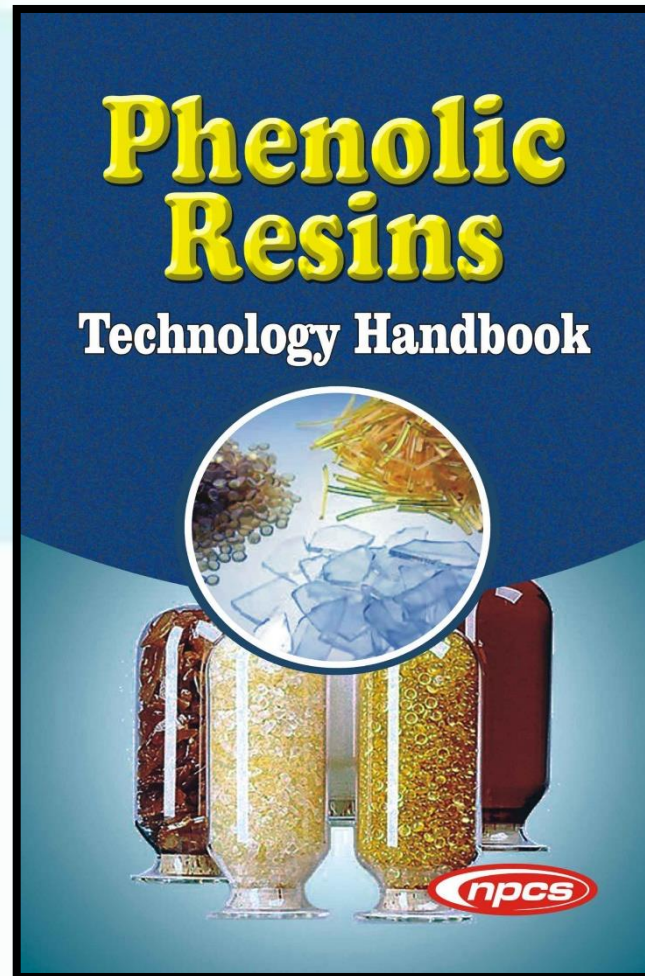


The leading market players in the global phenolic resins market primarily include Hitachi Chemical, Kolon Industries, BASF, Mitsui Chemicals, DIC Corporation, SI Group, Georgia Pacific Chemicals, Sumitomo Bakelite and others.



Phenolic Resins Technology Handbook

(2nd Revised Edition)



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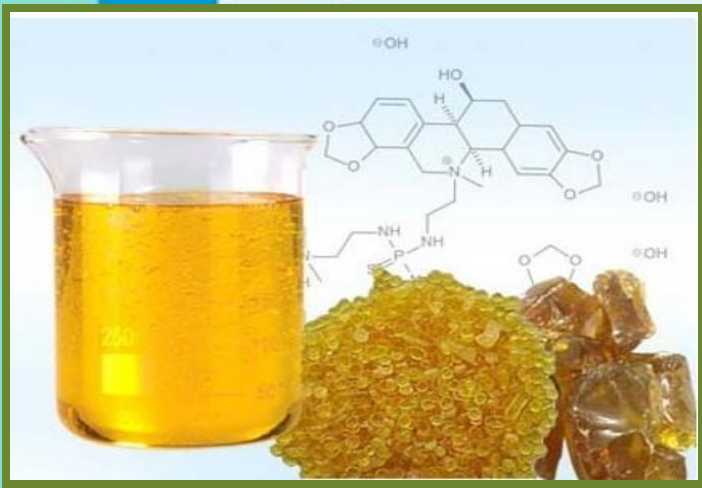
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Phenolic resins, also known as phenol-formaldehyde resins, are synthetic polymers that are produced from the reaction of phenol or substituted phenol with formaldehyde at high temperatures. These are widely used in wood adhesives, molding compounds, and laminates. The resins are flame-retardant, demonstrate high heat resistance, high tensile strength, and low toxicity, and generate low smoke. In the report, the phenolic resins market is segmented on the basis of product type, application, and region.

Phenolic Resin Market size estimated to reach at USD 19.13 billion in 2026. Alongside, the market is anticipated to grow at a CAGR of 5.4% during the forecast period. The global phenolic resins market has experienced a notable growth and it has been projected that the global market will see stable growth during the forecast period.

The high mechanical strengths, low toxicity, heat resistance, low smoke and other several properties has made the phenolic resins to make their use in the applications such as in laminations, wood adhesives, molding compound, construction, automobile and others. Growing demand of these applications has increased the production of phenolic resins to meet the current market demand. Also, phenolic resins is used in flame retardant which is very crucial for automobiles and aircrafts.



This book basically deals with general reaction of phenols with aldehydes, the resoles, curing stages of resoles, kinetics of a stage reaction, chemistry of curing reactions, kinetics of the curing reaction, the novolacs, decomposition products of resites, acid cured resites, composition of technical resites, mechanisms of rubber vulcanization with phenolic resins, thermosetting alloy adhesives, vinyl phenolic structural adhesives, nitrile phenolic structural adhesives, phenolic resins in contact adhesives, chloroprene phenolic contact adhesives, nitrile phenolic contact adhesives, phenolic resins in pressure sensitive adhesives, rubber reinforcing resins, resorcinol formaldehyde latex systems, phenolic resin chemistry, bio-based phenolic resins, flexibilization of phenolic resins, floral foam (Phenolic Foam) with resin manufacturing, lignin-based phenol formaldehyde (LPF) resins, phenol formaldehyde resin, alkaline phenol formaldehyde resin,

furfuryl alcohol phenol urea formaldehyde resin, phenol formaldehyde resin (Shell Sand Resin), phenol formaldehyde resin (Cold Box Resin), effluent treatment plant, standards and legislation, marketing of thermoset resins, process flow sheet, sample plant layout and photographs of machinery with supplier's contact details.

A total guide of phenolic resins and entrepreneurial success in one of today's most lucrative resin industry. This book is one-stop guide to one of the fastest growing sectors, where opportunities abound for manufacturers, retailers, and entrepreneurs. This is the only complete handbook on Phenolic resins.



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Tags

#Phenolic_Resins, #Phenol_Formaldehyde_Resin, #Manufacture_of_Phenol_Formaldehyde, #Production_of_Phenolic_Resins, #Phenol_Formaldehyde_Resin_Preparation, Phenol Formaldehyde Resin Manufacturing Process, Phenol Formaldehyde Resin PPT, #Phenol_Formaldehyde_Resin_Manufacture, Phenolic Resins Production, #Phenol_Formaldehyde_(PF)_Resin_Manufacturing_Industry, Preparation of a Phenol Formaldehyde Resin, Production of Phenolic Resins (Phenol Formaldehyde Resin), #Phenolic_Resin_Manufacturing, Process for Production of Phenolic Resin, Phenolic Resin Industry, Phenolic Resins Business, Phenolic Resin Manufacturing Process, Phenolic Resin Manufacturing Process Pdf, Process for Preparing Phenolic Formaldehyde Resole Resin, Phenol Formaldehyde Resin Plant, Phenolic Resins Manufacture, Phenol Formaldehyde Resins (PF) or Phenolic Resins, Phenolic Resin Manufacture in India, Book on Phenolic Resins Manufacturing Industry, #Book_on_Phenolic_Resins_Manufacturing, Manufacturing of Phenol Formaldehyde Resin, Phenolic Resins Technology Handbook, Phenolic Resins Book, #Manufacturing_Process_of_Furfuryl_Alcohol_Phenol_Urea_Formaldehyde_Resin,

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