

**Global Industrial Adhesives Market is
Expected to Reach USD 57.12 Billion by
2022 - A Boon for Entrepreneurs**

Production Process and Formulation of Industrial Adhesives

**(Polyvinyl Acetate Wood Adhesives, Aminoresin Wood Adhesives,
Phenolic Resin Wood Adhesive, Tannin-Based Wood Adhesives,
Phenolic Adhesives and Modifiers, Cyanoacrylate Adhesives, Hot-Melt
Adhesives, Pressure-Sensitive Adhesives, Water-Based Adhesives)**

Introduction

Adhesives are made in various types and may be synthetic or natural. The term synthetic adhesive means the adhesive which is prepared by using synthetic chemical such as synthetic resin. The manufacture of adhesive from synthetic resin is simple and can be started with very little investment. The most advantage to any type of adhesive as per market demand. Using adhesives as an alternative to mechanical fastening, welding and other joining methods can help your business achieve a competitive advantage.

Indian adhesive market size at Rs 60 bn currently implying per capita consumption of close to Rs 50. Adhesives consumption in India is much lower than the developed economies like USA,

Japan and Europe (per capital consumption estimates at Rs 750 in USA, Japan and South Korea combined). Industrial adhesives are fluids or gels, which help in holding two surfaces together by sticking to both of them and preventing their joint movement. They include glues and adhesives. The global industrial adhesives market is expected to reach USD 57.12 billion by 2022. Growth of key end-use industries such as packaging, construction and automotive is expected to remain a key driving factor for global industrial adhesives market over the forecast period.

Growing demand from packaging industry is expected to drive the market for waterborne adhesives. These are used in label applications, packaging tapes, office tapes, flexible laminations and food packaging as they offer improved chemical and heat resistance.

Due to advantages waterborne adhesive it offers and non reactive nature they are proffered in food packaging applications. Further growing demand from automotive industry is expected to drive the market for waterborne adhesives. These are used in interior structures such as dashboards head linings and others. Automotive industry is driven by demand from middle class consumer groups from developing countries such as Brazil, India and China.

Currently, the major applications of adhesives in India are in furniture, packaging, automotive and construction. India differs with other regions in terms of usage of disposable products. Growth in usage of such items would provide thrust to adhesive demand going ahead.

Adhesives were utilized in a sophisticated manner even in ancient times. Recent years have seen the rapid development of adhesive bonding as an economic and effective method for the fabrication of components and assemblies. The great many types of adhesives are currently in use and there is no adequate single system of classification for all products. The adhesives industry has generally employed classifications based on end use, such as metal to metal adhesives, wood adhesives, general purpose adhesives, paper and packaging adhesives etc. An adhesive or formulation is generally a mixture of several materials. The extent of mixture and the ratio usually depend upon the properties desired in the final bonded joint.

The basic materials may be defined as those substances, which provide the necessary adhesive and binding properties. The type of adhesive material is easier to define and usually falls into three categories; thermosetting resins, thermoplastic resins and elastomeric resins. A thermosetting system, 100 percent reactive when in a pure state, the epoxies are very desirable and more widely used than any other chemical type. Epoxy is one of the newer types and has penetrated more fields of manufacturing operations in a shorter space of time than any of its predecessors. The many catalysts used with epoxies produce systems of variable properties. The most common are the aromatic amines and cyclic anhydrides. The phenolics or phenol formaldehyde resins are formed by the condensation reaction of phenol and formaldehyde.

The phenolic resins have been used extensively in the lamination of plywood and in filament wound structures. There are two basic classes of phenolic resins resoles and novalacs, and both begin as phenol alcohols. When combined or alloyed with other adhesive systems, they become excellent structural adhesives and are widely used in this manner throughout the aerospace industry. The vinyl polymers do not stand alone as a structural adhesive, but hundreds of adhesives are formulated by the use of this class of polymer. The vinyls are important to adhesive bonding not only from the adhesive standpoint, but because the films derived from these substances are widely used as vacuum bags, slip sheets, etc. The more widely used ones are polyvinyl chloride, polyvinyl alcohol, and polyvinyl fluoride.

There are numerous kinds of adhesives used in different industries; polyvinyl acetate wood adhesives, aminoresin wood adhesives, phenolic resin wood adhesives, cyanoacrylate adhesives, hot melt adhesives, water based adhesives etc. The market for adhesives is comprised of thousands of end uses. The realm of market applications expands as new end uses keep developing, driven by the need for new and innovative attachment solutions. When looking at the total market, adhesives account for about 75% of the volume consumed.

This book basically deals with adhesive properties and general characteristics, adhesive materials and properties, adhesives types, thermoplastic adhesives, thermosetting adhesives, rubber resin blends, properties of basic adhesives types, acrylics acrylic acid diesters,

allyl diglycol, carbonate, animal glues, blood albumen, butadiene styrene rubbers, butyl rubber and polyisobutylene casein, cellulose derivatives, cellulose acetate, acetate butyrate cellulose, caprate cellulose, nitrate (nitrocellulose or pyroxylin), ethyl cellulose, hydroxy ethyl cellulose, methyl cellulose and sodium carboxy methyl cellulose, ceramic or refractory inorganic adhesives, cyanoacrylates, epoxy adhesives, epoxy nylon, epoxy polyamide, epoxy polysulphide, epoxy polyurethane, fish glue, furanes etc.

The present book covers the manufacturing processes of different industrial adhesives with their formulae. It is hoped that the book can serve to new entrepreneurs, technocrats and existing units to the technology of adhesive and guide them to a useful understanding of the wide variety of adhesives which exist today.

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Electric Heaters
High Frequency (Radio Frequency) Dielectric Heating
Induction Heating
Low-Voltage Electric Heating (L.V.H.)
Ultrasonic Activation
Bonding Pressure

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Thorough analysis of the project

Economic feasibility study of the Project

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- *Printing Inks*
- *Packaging Based Projects*
- *Perfumes, Cosmetics And Flavours*
- *Power Generation Based Projects & Renewable Energy Based Projects*
- *Pharmaceuticals And Drugs*
- *Plantations, Farming And Cultivations*
- *Plastic Film, Plastic Waste And Plastic Compounds*
- *Plastic, PVC, PET, HDPE, LDPE Etc.*

- *Potato And Potato Based Projects*
- *Printing And Packaging*
- *Real Estate, Leisure And Hospitality*
- *Rubber And Rubber Products*
- *Soaps And Detergents*
- *Stationary Products*
- *Spices And Snacks Food*
- *Steel & Steel Products*
- *Textile Auxiliary And Chemicals*

- *Township & Residential Complex*
- *Textiles And Readymade Garments*
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