

## ADHESIVES AND SEALANTS

An adhesive is a compound that adheres or bonds two items together so as to form a single unit. Adhesives may come from either natural or synthetic sources. Adhesives and sealants virtually touch every part of our lives. Some modern adhesives are extremely strong, and are becoming increasingly important in modern construction and industry.

Types of adhesives: Adhesives are classified based on,

Origin: Natural, Synthetic

Properties: Hot melts, Pressure sensitive, Reactive, UV curing

Resins used: Epoxies, Cyanoacrylates

Sealants: A sealant is a material used to prevent some form of fluid from escaping its container or providing a leak proof barrier. Ex. Fixing of glass window frames in aluminum channel.

Seven major end uses define adhesives sealants industry : construction, packaging, transportation, rigid and non-rigid bonding, consumer products and tapes. The top three sectors represented by construction, packaging and transportation drive the market

### **Proposal:**

Considering the growth in construction, furniture, rigid and flexible bonding segments, Apitco recommends that an Adhesive formulation unit can be considered by a new entrant.

### **Product mix:**

Neoprene based adhesives	20,000 liters per month
Starch based adhesives	20 tons per month
Silicone sealants	5000 liters per month
Specialties	2 Tons per month

## **Market**

Adhesives and sealants is a 20-million-tonne global industry with a sales value of over \$30 billion. Of this, the sealant industry contributes only \$5 billion. Globally, only a handful of companies hold a very large market share. These leading companies are Henkel, Avery Dennison, H.B. Fuller, 3M, Bostik-Findley, National Starch, Sika and UPM-Kymmene, all with sales of over \$1 billion.

In India the adhesive industry players are Pidilite, 3M India, Huntsman, National Starch, Bostik Findley, Sika, Industrial Adhesives, Anabond, Seagull Industries, Metlok and others. Sales of Pidilite the leader, were Rs.908 Crores in 2006. Average growth rate of sales of Pidilite is about 20 % per year.

Neoprene based adhesives have multi-uses (fevicol sr 998). They are used in leather, shoes, chappal, rexine, wood, foam, beds, interior decorations, railways, airlines, ships, bus body building, vinyl flooring, sunmica pasting and many more.. there is no substitute  
Indian market is reported at over 20 lac liters per month.

Starch based adhesives mainly go into corrugated box industry. Each unit is consuming nearly 1 to 2 tonnes/month. There are a number of corrugated board making units in Hyderabad  
Selling price rs 18,000 to rs 21,000/ton available in 2 grades

Silicone based sealants market is growing very fast as use of sheet glass in construction and partitions goes up. Sealants also have automobile and industrial uses.

Apart from the main classes of adhesives, there are many special products formulated for specific uses. Even though the market is small, the margins can be very high

## **Manufacturing Process:**

Proposed plant will produce Adhesive formulations. The manufacturing process consists of mixing and kneading the ingredients into a uniform paste / solution or powder. Suitable preservatives are added, the product is tested and packed.

### ***Technology:***

Adhesive formulation technology is available through private consultants.

### **Plant and Machinery:**

The plant and machinery required for adhesive formulation consists of Mixers, filling, packing and testing equipment.

### **Raw materials:**

Raw materials required are, different resins, solvents, preservatives

### **Utilities:**

Power, water and Diesel oil are the utilities required

### **Project cost:**

The project cost will be about Rs. 2 crores (including working capital margin)

**Turnover and profitability:**

Turnover will be about Rs. 6 crores with profit margin of 10 %.

**Suggested location:**

Around Hyderabad

**Entrepreneur profile:**

This is a marketing intensive project. The working capital needs are also high

**Apitco's Consultancy services:**

1. Market survey
2. Product mix selection
3. Technology tie-up