Expanded Plastics, Polyurethane, Polyamide and Polyester Fibres

(Polyepoxides and Epoxy Resins, Polyamides and Polyimides, Polyesters, Polyolefins, Polycondensation, Fiber Production, Prepolymer Production, Polyether Polyols with Epoxy Resins, Polyimides, Closed Cell Foamed Films and Sheets, Plastic Deformation, Closed Cell Polyimides)

Introduction

Expanded plastics are also known as foamed plastics or cellular plastics. Expanded plastics can be flexible, semi flexible, semi rigid or rigid. They can also be thermoplastic or thermosetting and can exist as open celled or closed celled materials. Expanded plastics may be prepared from most synthetic and many natural polymers. Most of the industrially important ones are made from polystyrene, polyvinyl chloride, polyurethanes and polyethylene, as well as from resins that derive from phenol, epoxy, etc. Polyurethane (PUR and PU) is polymer composed of a chain of organic units joined by carbamate (urethane) links.

Polyurethane polymers are formed by combining two bi or higher functional monomers. One contains two or more isocyanate functional groups and the other contains two or more hydroxyl groups. More complicated monomers are also used.

Polyurethane (PUR and PU) is a polymer composed of organic units joined by carbamate (urethane) links. While most polyurethanes are thermosetting polymers that do not melt when heated, thermoplastic polyurethanes are also available.

Polyurethane polymers are traditionally and most commonly formed by reacting a di- or poly-isocyanate with a polyol. Both the isocyanates and polyols used to make polyurethanes contain, on average, two or more functional groups per molecule.

A polyamide is a macromolecule with repeating units linked by amide bonds.

Polyamides occur both naturally and artificially. Examples of naturally occurring polyamides are proteins, such as wool and silk. Artificially made polyamides can be made through step-growth polymerization or solid-phase synthesis yielding materials such as nylons, aramids, and sodium poly (aspartate). Synthetic polyamides are commonly used in textiles, automotive applications, carpets and sportswear due to their high durability and strength.

The transportation manufacturing industry is the major consumer, accounting for 35% of polyamide (PA) consumption.

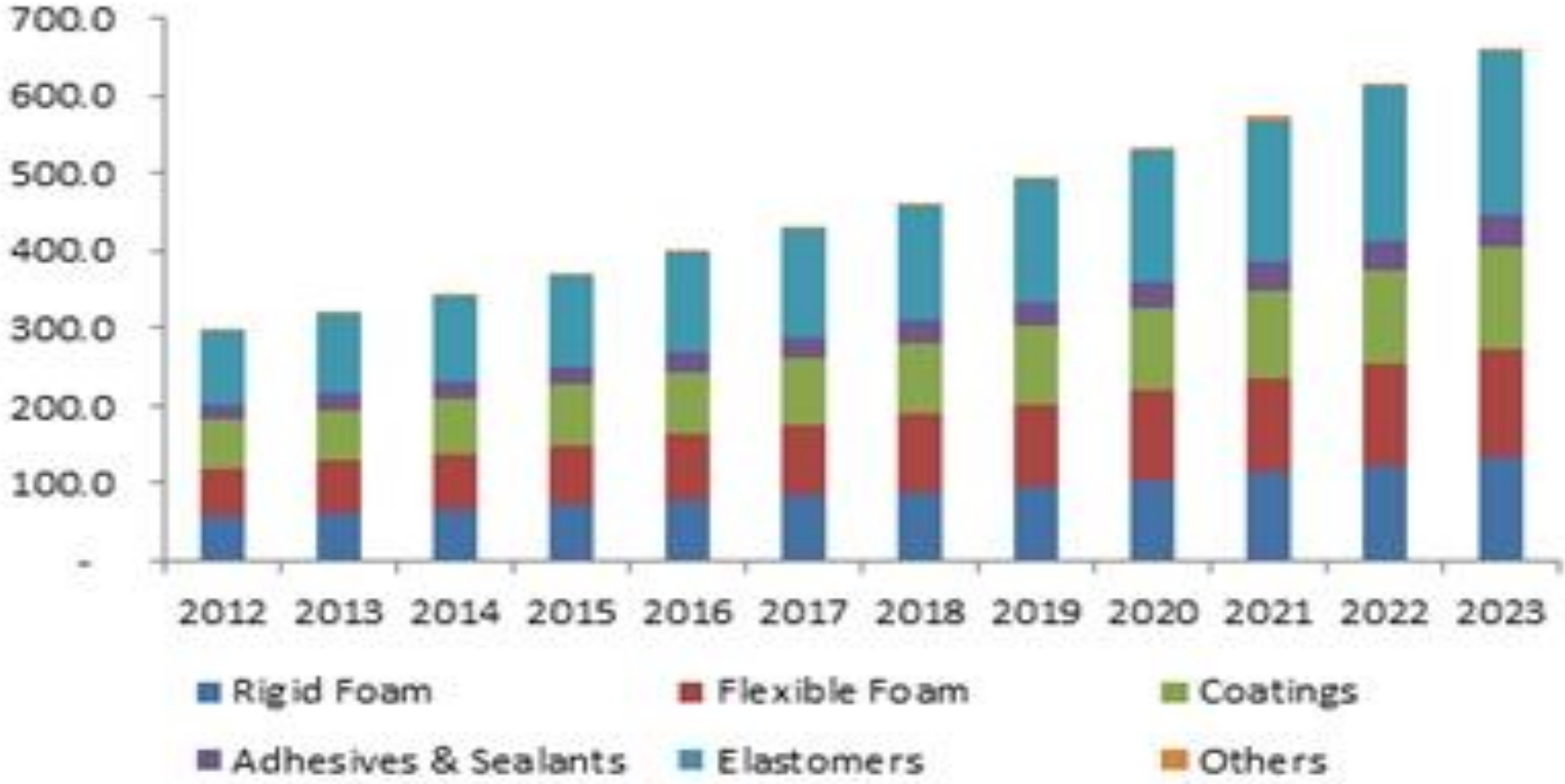
Polyester is a category of polymers that contain the ester functional group in their main chain. As a specific material, it most commonly refers to a type called polyethylene terephthalate (PET). Polyesters include naturally occurring chemicals, such as in the cutin of plant cuticles, as well as synthetics through step-growth polymerization such as polybutyrate. Natural polyesters and a few synthetic ones are biodegradable, but most synthetic polyesters are not. This material is used very widely in clothing.

Market Outlook

Polyurethane Market is set for intensifying growth in end user industries and is expected to reach ~24.2 million tons by 2022, Strategic market of global Polyurethane market is expected to grow at ~5.8% CAGR during 2016-2022 Based on types, Polyurethane is segmented into rigid foam, flexible foam, adhesives & sealants, coatings, elastomers and other products.

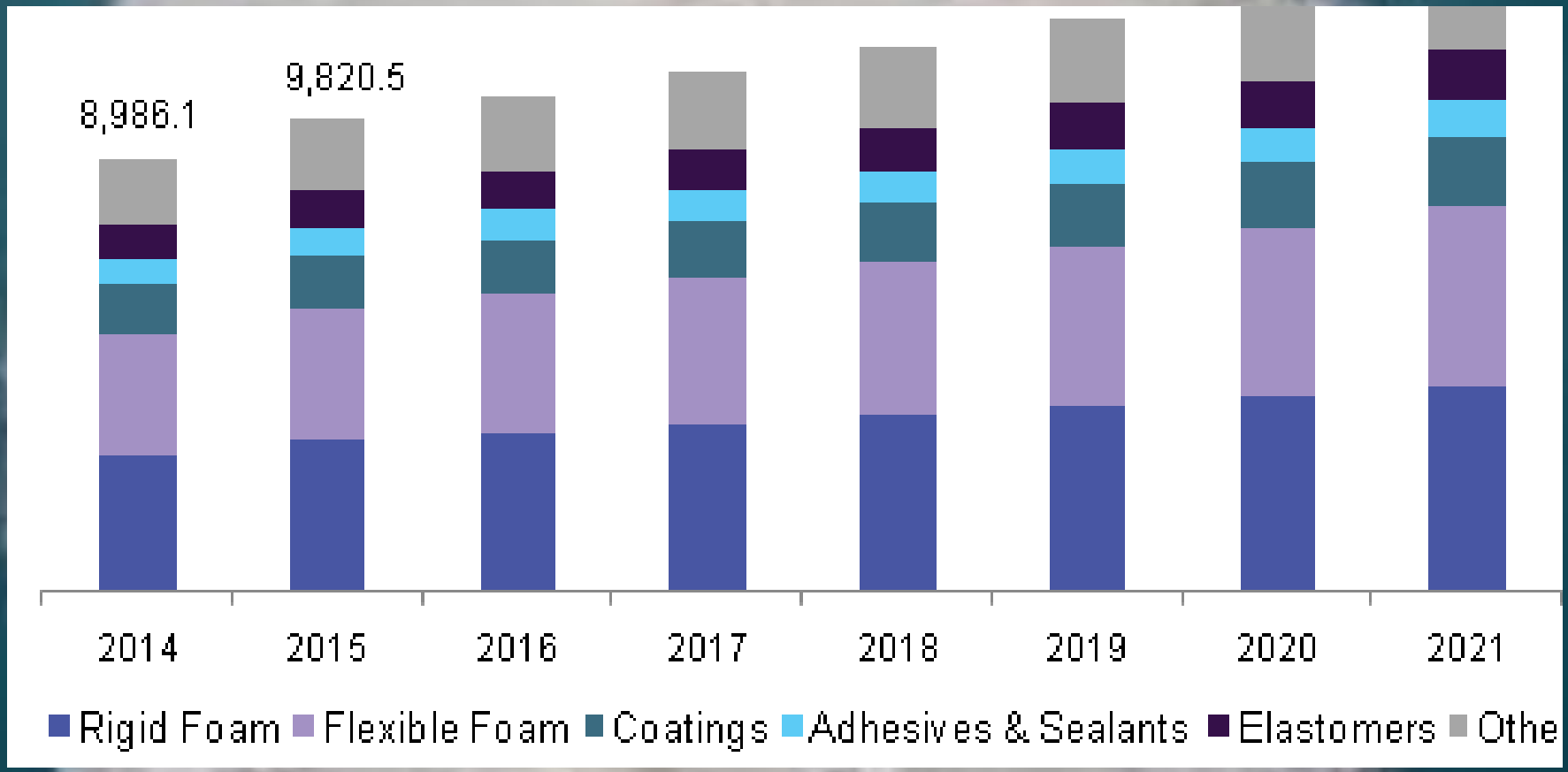
Global Polyurethane (PU) Market size was projected at $51.6 billion for 2015 and is anticipated to generate revenue greater than $78 billion by end of forecast timeline.

India Polyurethane (PU) Market Size



The polyurethane (PU) market size was USD 53.94 billion in 2015 and is projected to grow at a CAGR of 7% from 2016 to 2025. High demand for lightweight & durable materials from end-use industries such as furniture, construction, electronics & appliances, automotive, footwear & packaging has driven growth in recent years.

U.S. Polyurethane Market Revenue by Product, 2014-2025 (USD Million)



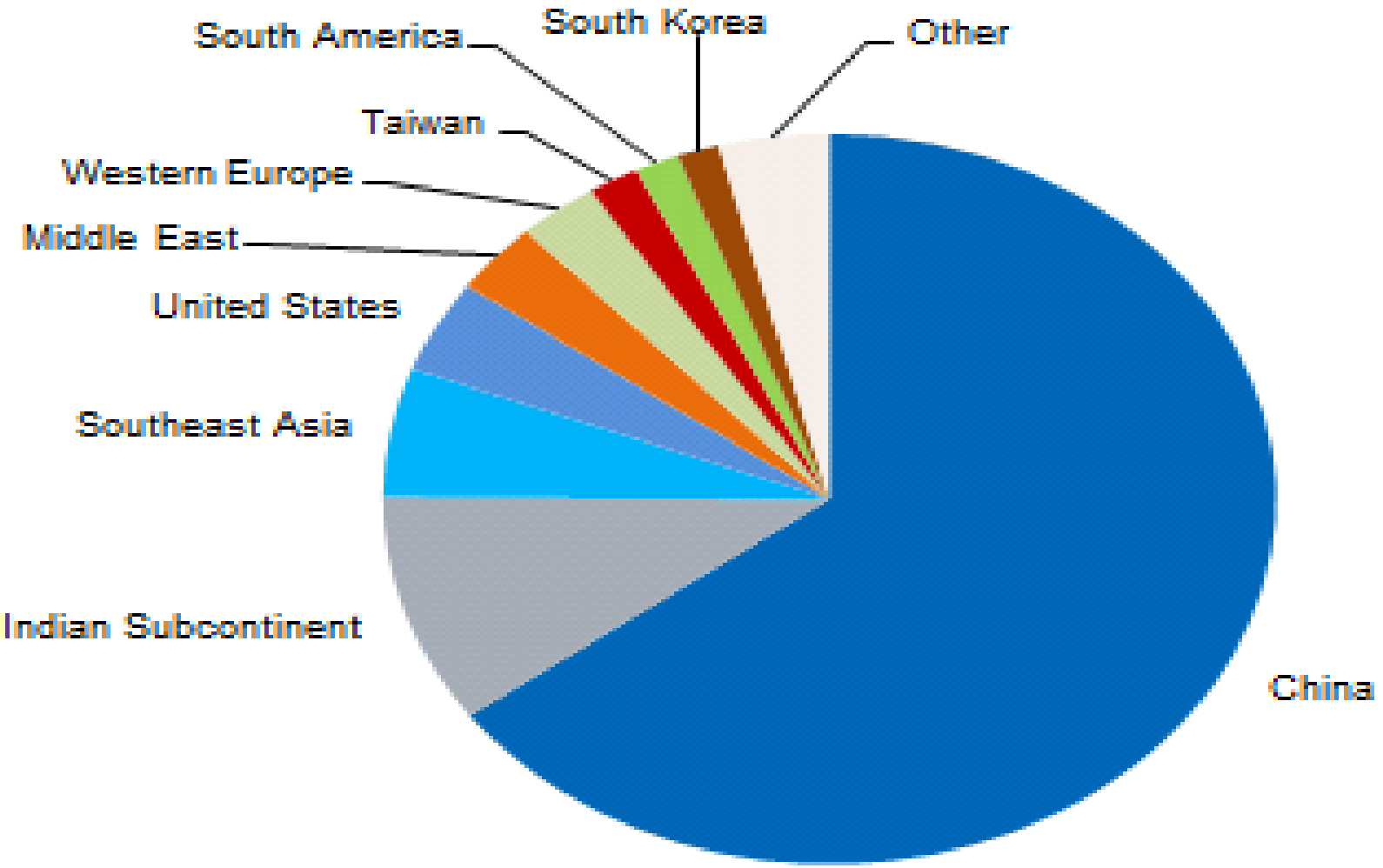
The global polyamide market was valued at USD 25.14 Billion in 2016 and is projected to reach USD 30.76 Billion by 2021, at a CAGR of 4.1% from 2016 to 2021.

The Indian polyester market witnessed a demand growth of 14 per cent year-on-year (YoY) in the second quarter of FY17.

Polyester fiber has become the fiber of choice within the textile industry, owing to its physical properties, price, recyclability, and versatility, which offer a unique set of advantages unmatched by any other fiber. Since 1990, overall demand for polyester fibers has grown at a sustained rate of nearly 7% per year globally. The polyester fiber market accounts for about half of the total global fiber market.

In 2016, total demand for polyester fibers is dominated by polyester yarn, which accounts for about 68% of overall consumption (with textile filaments having the greatest share of the yarn segment).

Global Consumption of Polyester Fibres



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Tags

Polyurethane Foam Business, Polyurethane Industry, Polyamide Business, Polyamide Industry, Polyester Fiber Business, Polyepoxides and Epoxy Resins, Polyether Polyols With Epoxy Resins, Polyamides and Polyimides, Producing Expanded and Cured Polyester Resin, Foamed Unsaturated Polyester Resins With Gel Coat, Unsaturated Polyester Compositions With High Impact Strength, Polyolefins Processing, Flexible Polyurethane Foam, Stabilization of Flame Retardant Premix, Flame and Smoke Retardant Non-Shrinkable Polyurethane Foam, Foam Preparation Methods, Polyol R, Flexible Foam Preparation, Rigid Foam Preparation, Reclamation of Products, Formulation of Flexible Polyurethane Foam, Reinforced Foamed Resin Structural Material, Odorant Hydrophilic Foam Compositions, Reinforced Polyurethane Foams, Making Castings of Thermosetting Polyurethane Materials, Continuous Production of Foamed Polyethylene Films, Closed Cell Foamed Films and Sheets, Types of Polyamide Compositions, Polyamide-Polyester Blends, Allied Chemical Process, Eastman Process, Firestone Process, Teijin Process, Toyo Rayon Process, Vinyl Modified Polyamides, Esso Process, Inventa Process, Polycondensation, Composite Yarn Production, Integrated Polyester Production Processes, Prepolymer Production, Fiber Production Process, British Nylon Spinners Process, DU Pont Process, Firestone Process, Glanzstoff Process, Imperial Chemical Industries Process, Kanegafuchi Process, Konegafuchi/Snia Viscosa Process, Monsanto Process, Teijin Process, Melt-Spinning Processes, Allied Chemical Process, British Nylon Spinners Process, Carl Freudenberg Process, Du Pont Process, Fiber Industries Process,

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Firestone Process, Imperial Chemical Industries Process, Monsanto Process, Solution Spinning Processes, Celanese Wet-Spinning Process, Drawing Processes, DU Pont Process, Monsanto Process, Snia Viscosa Process, Fiber After Treatment, Manufacturing Process of Polyester Fiber, Production Process of Fiber, Polyester Fiber Production, Manufacturing of Polyester Fiber, Processing of Polyester Fibers, Polyester Fiber Manufacture, Polyester Fiber Production Line, Compositions of Polyester Fibre, Production of Composite Yarn, Process for Production of Composite Yarn, Polyester Production Process, Integrated Polyester Production Process, Prepolymer Production, Prepolymer Production Plant, Method for Manufacturing Prepolymer, NPCS, Niir, Process Technology Books, Business Consultancy, Business Consultant, Project Identification and Selection, Preparation of Project Profiles, Startup, Business Guidance, Business Guidance to Clients, Startup Project, Startup Ideas, Project for Startups, Startup Project Plan, Business Start-Up, Business Plan for Startup Business, Great Opportunity for Startup, Small Start-Up Business Project, Best Small and Cottage Scale Industries, Startup India, Stand Up India, Small Scale Industries, New Small Scale Ideas for Polyolefins Processing Industry,

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Small Scale Prepolymer Production, Guide to Starting and Operating Small Business, Business Ideas for Polyolefins Processing, How to Start Polyester Fiber Production Business, Starting Polyolefins Processing, Start Your Own Prepolymer Production Business, Business Plan for Polyester Fiber Production, Small Scale Industries in India, small Scale Industry You Can Start on Your Own, Business Plan for Small Scale Industries, Set Up Prepolymer Production, Profitable Small Scale Manufacturing, How to Start Small Business In India, Free Manufacturing Business Plans, Small and Medium Scale Manufacturing, Profitable Small Business Industries Ideas, Business Ideas for Startup

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- *Hospital Based Projects*
- *Herbal Based Projects*
- *Inks, Stationery And Export Industries*

Sectors We Cover Cont...

- *Infrastructure Projects*
- *Jute & Jute Based Products*
- *Leather And Leather Based Projects*
- *Leisure & Entertainment Based Projects*
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- *Minerals And Minerals*
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- *Paper And Paper Board, Paper Recycling Projects*
- *Printing Inks*
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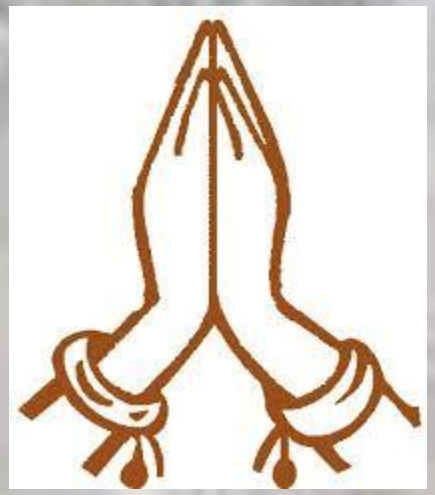

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