

Acrylic Acid Production

from

Propylene.

Business Ideas & Opportunities

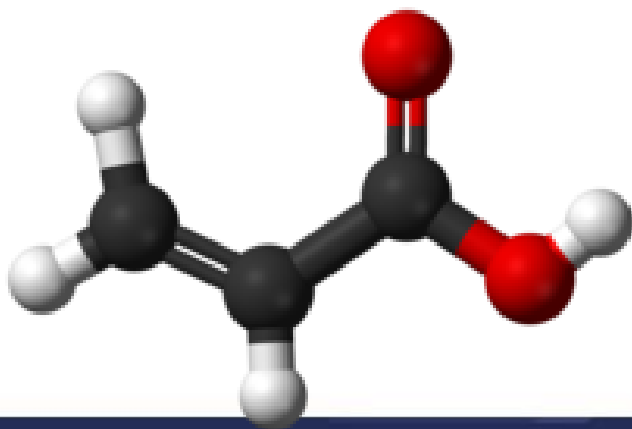
in Petrochemicals Sector



Acrylic Acid

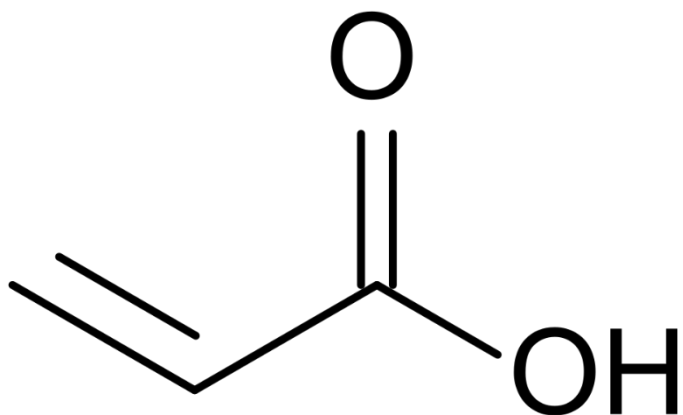
Introduction

Acrylic acid (2-propenoic acid) is a highly reactive carboxylic acid that can react with itself to form polyacrylic acid, which is used as an absorbent in hygiene products. It also can react with alcohols to form acrylates (esters) that are used in a wide range of polymers. However, polymers commonly called acrylic (Plexiglas, textiles, etc.) contain acrylate monomers but are often produced from chemicals other than acrylic acid.



Applications

- Chemical compounding
- Chemical intermediate
- Detergent
- Industrial water treatment



Uses

Acrylic acid is used in the manufacture of plastics, in latex applications, in floor polish, in polymer solutions for coatings applications, emulsion polymers, paint formulations, leather finishing's, and paper coatings. Acrylic acid is also used as a chemical intermediate.

One of the main applications is in the manufacture of superabsorbent polymers that can soak up large amounts of liquid and are used mainly in diapers and other hygiene products.

Acrylic Acid

The primary use of acrylic acid is in the production of acrylic esters and resins, which are used primarily in coatings and adhesives. It is also used in oil treatment chemicals, detergent intermediates, water treatment chemicals, and water absorbent polyacrylic acid polymers. Acrylic acid is used widely for polymerization, including production of polyacrylates.

It is a monomer for polyacrylic and polymethacrylic acids and other acrylic polymers. It is used in the manufacture of plastics, as a tackifier, as a flocculant, in the production of water-soluble resins and salts, as a comonomer in acrylic emulsion and solution polymers and in molding powder for signs, construction units, decorative emblems and insignias. It is used in polymer solutions for coatings applications, in paint formulations, in leather finishings, in paper coatings, in polishes and adhesives and in general finishes and binders.

Market Outlook

Acrylic Acid Market size was valued at \$12,584.1 million in 2015, and is expected to reach \$19,509.4 million by 2022, supported by a CAGR of 6.6% during the forecast period 2016 to 2022.

Acrylic Acid is a derivative of Esters and Acrylates They have a wide range of application in paper treatment, plastic additives, textiles, sealants, adhesives, and surface coatings. The prices of oil has been rising due to this manufacturers are using bio-based techniques to produce this unsaturated carboxylic acid and acrylates from renewable resources such as glycerol, sugar, etc.

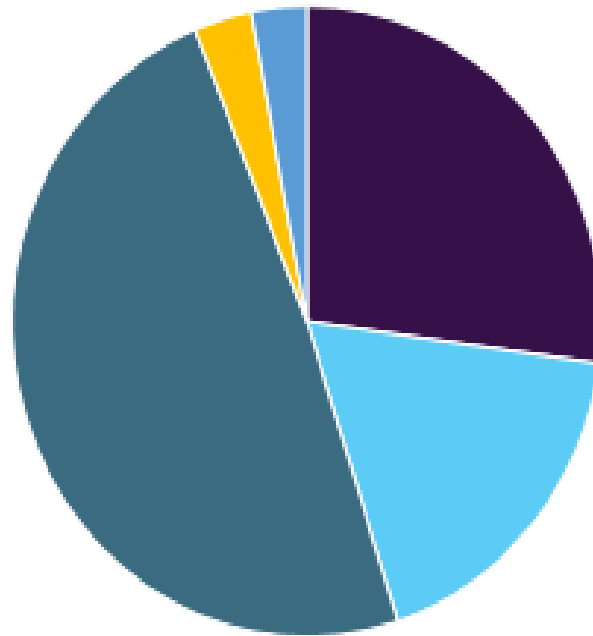
Growing demand in emerging markets, increasing demand from end user industries and rising demand for high strength materials are factors fuelling the market growth. However, volatile prices of the raw materials and stringent government regulations are hindering the market growth. Moreover, demand for Polymethyl methacrylate (PMMA) resins in different industries provides ample opportunities for market growth.

Based on end user, personal care segment is projected to grow at a steady rate due to increasing demand for super absorbent polymers. Personal care products such as diapers and adult incontinence products are increasingly using super absorbent polymers.

Global supplies of acrylic acid are likely to remain strong over the next couple of years with emerging markets posting higher demand. Acrylic acid remains a sought-after industrial material, owing to its wide-ranging properties. Acrylic acid is a specialty chemical and finds widespread application in several large-scale industrial verticals. Construction, polymer and adhesive are some of its major end-use industries, which are exhibiting healthy growth. The aforementioned factors are expected play a key role in governing the growth trends of the global acrylic acid market in the forthcoming years.



Global Acrylic Acid Market Volume, By Region, 2015 (Kilo Tons)



■ North America ■ Europe ■ Asia Pacific ■ Central & South America ■ Middle East & Africa

Industries are developing and commercializing processes for producing it from petrochemicals. Due to the rising price of oil globally, manufacturers are using bio-based techniques to produce this unsaturated carboxylic acid and acrylates from renewable resources such as glycerol, sugar, etc. Renewable feedstock shows cost competitive outcomes as compared to petrochemical routes. Applications in Detergents, Adult Incontinence and Personal Care Products have contributed to the increased demand for acrylic acid.



Major end users are diapers, surface coating, adhesives and sealants, plastic additive, water treatment, textiles and surfactants. Currently, the compound is majorly consumed in manufacturing diapers; this segment would dominate the sector through 2022. Acrylic based surfactants are used as binders that enhance the flexibility, gloss and durability of the coatings. Moreover, it increases the shelf life of paints; improve the stability of freeze-thaw and mechanical stability. These factors are driving the demand for the compound in surfactants industry.



The acrylates are widely used in detergents, flocculants, thickeners and dispersants. The acrylate esters were the largest derivative that was consumed globally. They provide several desirable properties to the polymers such as color stability, resistance to heat, clarity and weather-ability, thus being used widely in the coating and adhesives industry. The personal care products such as adult incontinence and diapers are majorly using the super absorbent polymers. Hence, there is an increase in demand for the super absorbent polymers, which is positively contributing to the market growth. The acrylic acid-based products are used in the textile industry where they are used as fillers in the padded jackets.

By geography, Asia Pacific is anticipated held largest market share due to rising derivatives consumption in surfactants, coatings, personal care products and adhesives. In addition, North America is expected to have considerable market share owing to increasing demand in end user industries and growing geriatric population in the U.S. and Canada.

Some of the major industries operating in the acrylic acid market include BASF SE, Nippon Shokubai Co. Ltd., LG Chem Ltd., Mitsubishi Chemical Holdings Corporation, Sasol Limited, Arkema, Evonik Industries, The Dow Chemical Company, Hexion Inc., and PJSC Sibur Holding.

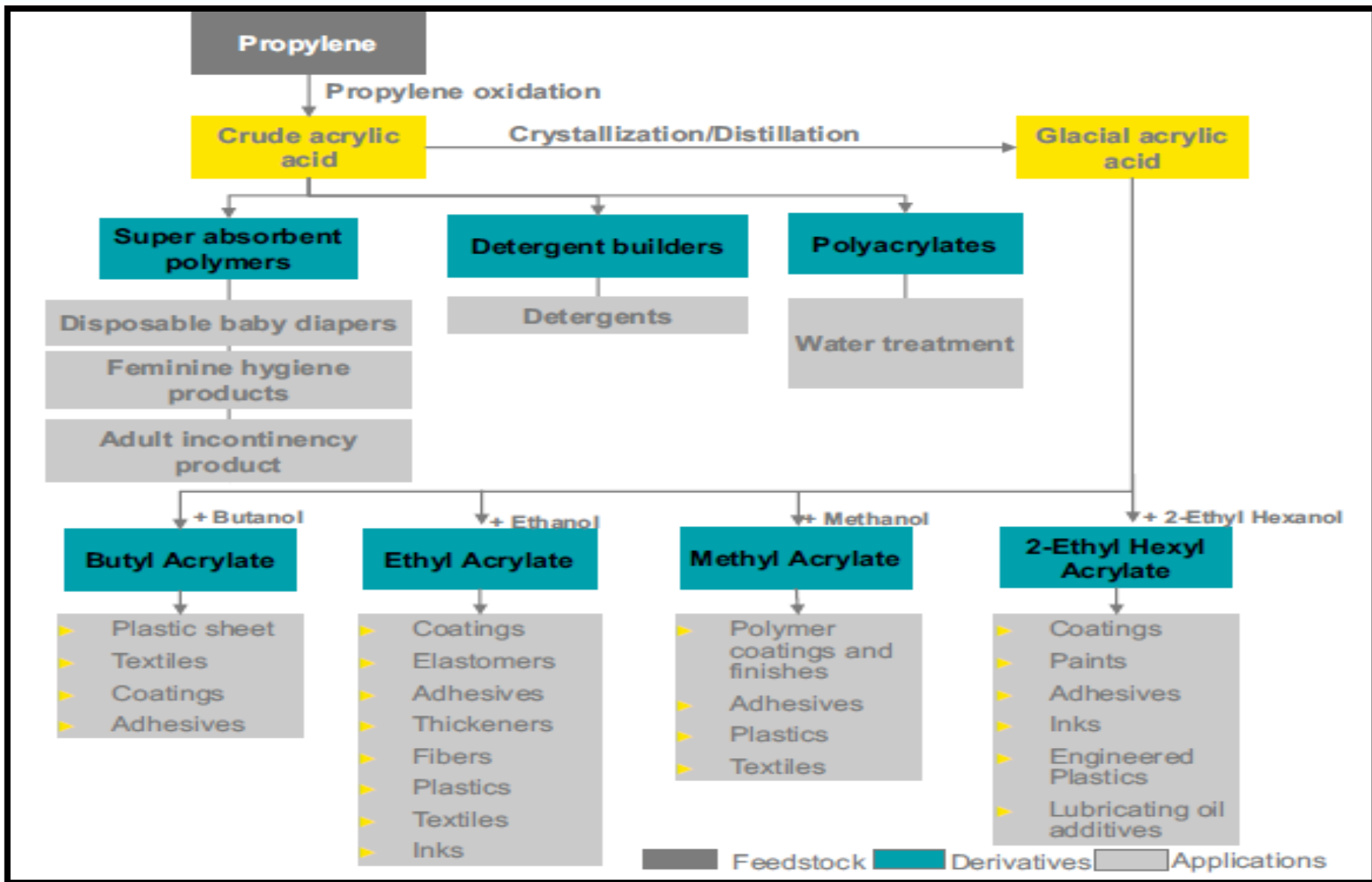


Indian Acrylic Acid Market: Demand-Supply Gap

Demand for acrylic acid is estimated to reach 260 Kilo Ton Per Annum (KTPA) by 2020. Indian acrylic acid market has a huge supply demand gap of 200 KTPA. At present, the market is entirely import dependent due to absence of local manufacturers. As a result, there is a huge potential for local manufacturers to set up manufacturing facilities within the country in order to meet the growing demand.

Indian acrylic acid market is estimated to reach INR16.9 billion in 2020 from INR7.8 billion in 2012, growing at a Compounded Annual Growth Rate (CAGR) of 10.1%.

Acrylic Acid Value Chain



Source: Indian Oil Corporation Ltd.

Indian Source of Raw Material

Propylene is the primary feedstock required for manufacturing acrylic acid.

- **Reliance**
- **Indian Oil Corporation Ltd (IOCL)**
- **HPCL-Mittal Energy Limited (HMEL)**
- **Haldia Petrochem**
- **Bharat Petroleum Corporation Ltd (BPCL)**
- **Mangalore Refinery and Petrochem**
- **GAIL**
- **Hindustan Petroleum Corporation Ltd (HPCL)**

Major Queries/Questions Answered in the Report?

- 1. What is Acrylic Acid Manufacturing industry ?**
- 2. How has the Acrylic Acid Manufacturing industry performed so far and how will it perform in the coming years ?**
- 3. What is the Project Feasibility of Acrylic Acid Manufacturing Plant ?**
- 4. What are the requirements of Working Capital for setting up Acrylic Acid Manufacturing plant ?**

- 5. What is the structure of the Acrylic Acid Manufacturing Business and who are the key/major players ?**
- 6. What is the total project cost for setting up Acrylic Acid Manufacturing Business?**
- 7. What are the operating costs for setting up Acrylic Acid Manufacturing plant ?**
- 8. What are the machinery and equipment requirements for setting up Acrylic Acid Manufacturing plant ?**

9. Who are the Suppliers and Manufacturers of Plant & Machinery for setting up Acrylic Acid Manufacturing plant ?

10. What are the requirements of raw material for setting up Acrylic Acid Manufacturing plant ?

11. Who are the Suppliers and Manufacturers of Raw materials for setting up Acrylic Acid Manufacturing Business?

12. What is the Manufacturing Process of Acrylic Acid?

- 13. What is the total size of land required for setting up Acrylic Acid Manufacturing plant ?**
- 14. What will be the income and expenditures for Acrylic Acid Manufacturing Business?**
- 15. What are the Projected Balance Sheets of Acrylic Acid Manufacturing plant ?**
- 16. What are the requirement of utilities and overheads for setting up Acrylic Acid Manufacturing plant?**
- 17. What is the Built up Area Requirement and cost for setting up Acrylic Acid Manufacturing Business?**

18. What are the Personnel (Manpower) Requirements for setting up Acrylic Acid Manufacturing Business?

19. What are Statistics of Import & Export for Acrylic Acid?

20. What is the time required to break-even of Acrylic Acid Manufacturing Business?

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22. What are the Project financials of Acrylic Acid Manufacturing Business?

- 23. What are the Profitability Ratios of Acrylic Acid Manufacturing Project?**
- 24. What is the Sensitivity Analysis-Price/Volume of Acrylic Acid Manufacturing plant?**
- 25. What are the Projected Pay-Back Period and IRR of Acrylic Acid Manufacturing plant?**
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- 28. What is the Market Study and Assessment for setting up Acrylic Acid Manufacturing Business?**
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Tags

#Acrylic_Acid_from_Propylene, #Acrylic_Acid_Production, #Acrylic_Acid, Process for Producing Acrylic Acid from Propylene, #Production_of_Acrylic_Acid_from_Propylene, Acrylic Acid Pdf, Acrylic Acid Preparation, Acrylic Acid Production And Manufacturing Process, Acrylic Acid Manufacture, Acrylic Acid Uses, Acrylic Acid Production Process, Process for Production of Acrylic Acid, Acrylic Acid Manufacturing Process, #Acrylic_Acid_Production_Business, Acrylic Acid Industry, Acrylic Acid Manufacturing Plant, #Manufacturing_of_Acrylic_Acid, Acrylic Acid Manufacture in India, Acrylic Acid Business, Production of Acrylic Acid in India, #Detailed_Project_Report_on_Acrylic_Acid_Production_Business, Project Report on Production of Acrylic Acid from Propylene, Pre-Investment Feasibility Study on Acrylic Acid Manufacturing Plant, Techno-Economic feasibility study on Acrylic Acid Manufacturing Plant, #Feasibility_report_on_Acrylic_Acid_Manufacturing_Plant, Free Project Profile on Production of Acrylic Acid from Propylene, #Project_profile_on_Acrylic_Acid_Production_Business, Download Free Project Profile on Acrylic Acid Manufacturing Plant, Highly Profitable Chemical Business Ideas, Small Scale Chemical Business Ideas & Opportunities, Chemical Business Opportunities, How to Start a Chemical Industry, Chemical Business Ideas for Aspiring Entrepreneurs, Industrial Chemical Manufacturing Business, Lucrative Chemical Business Ideas & Opportunities, Business Ideas for Chemical Industry, How to Start a Chemical Business? Chemical Industry, Starting a Chemical Business, Commercial Production of Chemicals, Chemical Industry Projects, Starting Your Own Chemical Business, Chemical Compound

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