

Markets & Profitability



Market Insights: Propylene Glycol – 2022

Market Insights: Propylene Glycol - 2022 is one in a series of reports published as part of NexantECA's Markets & Profitability program.

NexantECA's Market Insights report provides a comprehensive review of the global propylene glycol market, including supply, demand and trade and development of bio-based propylene glycol.

The following scope is covered:

- Discussion regarding key market drivers and constraints for each region
- Supply/Demand/Trade for nine regions: North America, South America, Western Europe, Central Europe,
 Eastern Europe, Middle East, Africa, Asia Pacific, and China
- Competitiveness analysis, including competitive landscape and cost competitiveness
- Price history and forecast with commentary regarding latest trends
- Forecast period: 10 years history and 15 year forecast to 2035

Along with the written report, data is provided in Excel including global capacity list

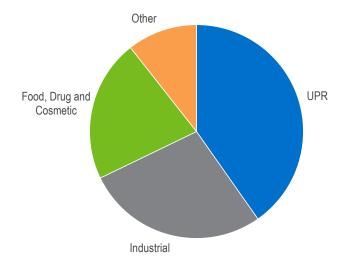
Report Abstract:

Propylene glycol (propane-1,2-diol) is typically produced from propylene oxide reacted with water. The resulting mixture from the reaction contains mono-, di- and tri-propylene glycols which are then distilled. There are two distinct propylene glycol grades:

- Technical (industrial)
- Food and pharmaceutical, which is covered by the USP/EP (US Pharmaceutical and European Pharmaceutical)

PG used as a raw material to produce unsaturated polyester resins (UPR's) is sometimes differentiated as UPR grade PG, but this is similar / has overlap with the broader technical grade.

The technical grade, or industrial propylene glycol is largely used as a raw material in the production of UPR's. It is also used as a heat transfer medium, to control viscosity, to dissolve active agents or protect against corrosion and pressure burst. The industrial segment is mainly the antifreeze market. Demand growth within the "other" segment has been boosted in recent years by the growth of electronic cigarettes



Mono Propylene glycol (MPG) has a broad spectrum of uses:

- Unsaturated polyester resins (UPR)
- Functional fluids (e.g., anti-freeze)
- Foods/drugs/cosmetics

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Others: liquid detergents, plasticizers, paints/coatings, tobacco humectants and pet food.

The largest market segment is unsaturated polyesters, which are resins used in fiberglass-reinforced structures and surface coatings. Fiberglass-reinforced structures are used in the construction (bath/shower units), marine (boat hulls), and transportation (sheets) industries.

Functional fluids, such as anti-freeze and de-icing solutions, are the second largest outlet for propylene glycol. In uses like aircraft de-icing and food industry coolant, propylene glycol is preferred over mono ethylene glycol (MEG) due to its much lower toxicity (primarily environmental concerns). MPG is a higher cost product than MEG and its penetration of the automotive market has been less successful thus far.

Propylene glycol is an excellent solvent and extractant. Solvent applications include alkyd resins, printing inks, and coatings. It also finds broad use as a humectant in the pharmaceutical, cosmetic, animal food, and tobacco industries. Cosmetics include personal care products such as antiperspirants and deodorants. In these applications, propylene glycol functions to keep the moisture content of the materials in a narrow range, despite fluctuation in environmental humidity.

Non-ionic detergents utilizing propylene glycol find application in the petroleum production, sugar refining, and papermaking industries, as well as toiletries and liquid detergents. Miscellaneous uses for propylene glycol include plasticizers and hydraulic brake fluids.

Major applications for di-propylene glycol (DPG) include plasticizers, unsaturated polyester resins, and cosmetics (fragrance carrier).

Tri-propylene glycol (TPG)'s major uses include urethane elastomers, adhesives, and radiation curable coatings.

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Each region section in Chapter 3 includes:

- Market Overview
- Market Drivers
- Market Constraints
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Report License Details:

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NexantECA serves its clients from over 30 offices located throughout the Americas, Europe, the Middle East, Africa and Asia.

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