

Mono Propylene Glycol Methodology

Mono propylene glycol (MPG), otherwise referred to as propylene glycol (PG), is a product that is used in the manufacture of high performance unsaturated polyester resins (UPR), as well as engine coolants, antifreeze applications, aircraft wing and runway de-icer, food, pharmaceuticals and personal care products, and paints/coatings.

The manufacture of plasticisers and hydraulic brake fluids consume considerable quantities of propylene glycol and it is also used in the manufacture of non-ionic detergents which are utilised not only in the petroleum, sugar refining and paper making industries, but also in the preparation of toiletries, antibiotics and liquid washing formulations.

Propylene glycol is an excellent solvent and finds outlets in printing inks, alkyd resins and as an extractant.

Propylene glycol is relatively non-toxic but is a mild irritant.

ICIS pricing quotes mono propylene glycol in **Europe, Asia-Pacific** and the **USA**.

Frequency:

Published weekly on Fridays.

MPG (EUROPE)

Weekly Price Assessments:

MPG Spot Prices

- FD NWE (MPGI) (EUR/MT & conversion to US CTS/LB)

Feedstock Prices

- PROPYLENE Monthly contract (EUR/MT & conversion to US CTS/LB)
- PROPYLENE OXIDE (MISC) (EUR/MT & conversion to US CTS/LB)

MPG (Asia-Pacific)

Weekly Price Assessments:

Propylene Glycol (Industrial Grade) Bulk Spot Prices

- CFR N.E.ASIA (USD/MT & conversion to US CTS/LB)
- CFR S.E.ASIA (USD/MT & conversion to US CTS/LB)
- EX-TANK CHINA (CNY/MT)

Propylene Glycol (Industrial Grade) Drummed Spot Prices

- CFR S.E.ASIA (USD/MT & conversion to US CTS/LB)

Propylene Glycol (pharmaceutical grade) Drummed Spot Prices

- CFR N.E.ASIA (USD/MT & conversion to US CTS/LB)
- CFR S.E.ASIA (USD/MT & conversion to US CTS/LB)

Feedstock Prices

- PROPYLENE OXIDE KOREA quarterly contract (USD/MT)

MPG (USA)

Weekly Price Assessments:

Propylene Glycol (Industrial Grade)

- FOB PGI monthly (US CTS/LB & conversion to USD/MT)

Propylene Glycol (US Pharmaceutical Grade)

- FOB PGUSP monthly (US CTS/LB & conversion to USD/MT)

Propylene Glycol (Antifreeze Grade)

- FOB PGAF monthly (US CTS/LB & conversion to USD/MT)

Propylene Glycol (PGI Grade)

- FOB EXPORT monthly (US CTS/LB & conversion to USD/MT)

Feedstock Prices

- PROPYLENE C GRADE monthly (US CTS/LB)

General Information:

Assessment window: Price assessments are based on information supplied by market participants through the week up to close of business on Fridays at 1800 hours in London, Singapore and Houston.

Specification: Minimum 99.7% purity. In the US, PGI and PGUSP-grade material from at least some producers have the same purity. However, the price for PGUSP is higher because of the greater level of care needed in handling and transporting to maintain the original purity level.

Timing: Cargoes loading or delivered four-six weeks forward from the date of publication in Europe and the US, two-six weeks forward in Asia.

Terms: 30-60 days after Bill of Lading date.

Standard cargo size: In Europe, a typical full bulk truck load size is 20-25 tonnes. In Asia, typical bulk shipments are up to 1,000 tonnes. One iso-tank is around 20 tonnes. In southeast Asia, drummed material is shipped in containers where one container carries 80 drums totalling around 16 tonnes.

Assessment basis: The price ranges include spot transactions reported as physical deals and concluded between buyers and sellers during the previous week. Certain prices may be excluded from the range if they were negotiated in unusual circumstances or if special conditions were thought to apply. In the absence of business, the price spread can also move based on the majority of market sentiment. Price adjustments on the basis of netback assessments are avoided.

European assessments reflect pre-discounted technical/industrial grade values only. The price range represents weekly spot prices for mainland northwest Europe including Germany, the Benelux countries and northern France. When applicable,

business concluded in the Mediterranean, Scandinavia, the United Kingdom and central Europe is quoted in the body of the text. In Europe, pharmaceutical grade (USP) and Di Propylene Glycol (DPG) are discussed in the commentary only.

For the Asia-Pacific report, information is gathered throughout the week from market participants. The published prices do not include discounts for volume or customer status. Certain prices may be excluded from the range if they have been negotiated in unusual circumstances, or if they were outlying or one-off, non-repeatable deals, or if special conditions are thought to apply. The assessments are based on the editor's best judgment using a combination of deals and discussions heard and majority market sentiment.

Industrial Grade in Asia: CFR N.E. Asia numbers are prices of imports mainly into China. In Taiwan, trades in the domestic market are mentioned in the text where available. In China, ex-tank prices represent mainly deals and discussions for imported and domestic material. In southeast Asia, drummed prices tend to be around \$100-150/tonnes higher than bulk prices due to drum costs.

Imports originating from China to northeast Asia and southeast Asia are mostly mentioned in the text. Such imports are usually used only selectively in certain downstream segments with less stringent production requirements.

Pharmaceutical Grade in Asia: CFR N.E. Asia numbers are prices of imports mainly into China on drummed basis. CFR S.E. Asia numbers are also on drummed basis.

In the US, Di Propylene Glycol (DPG) is discussed in the commentary only.

Monthly quotes are given for industrial, pharmaceutical and antifreeze grades, and for export (usually industrial grade).

The weekly US MPG report focuses primarily on the East of the Rockies market. Although contract prices are normally settled on a monthly basis, adjustments to the tables are on an as-needed basis in order to better reflect any competitive price initiatives and/or erosion of settled rates. Focus on different product grades changes in accordance with the season (i.e. antifreeze-grade product (PGAF) is the focus during the North American winter.)

All regional reports offer market commentary that includes details of traced transactions, news on the supply/demand balance, export/import information, contract price negotiations and general sentiment for price direction. Where applicable there is product information, comments on up and downstream market developments and general market intelligence.

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