

Propylene Oxide & Derivatives prices and global coverage

Issue 23-2 | Wednesday 11 October 2023

HIGHLIGHTS

US

- The October PO price settled upwards and suppliers issued price increases for downstream propylene glycols and polyether polyols
- Negotiations for October contract business continue for propylene glycols and polyether polyols
- One major PO producer is undertaking planned maintenance this month

Europe

- A fire at a waste treatment facility in the Netherlands is resulting in some production constraints at POSM units. A major PO/TBA unit is undergoing planned maintenance
- Negotiations continue for October polyether polyols contract prices
- Domestic propylene glycol prices are tending upwards

China

- Propylene oxide prices have softened in China after the Golden Week holiday
- Several plants are expected to return to production in the second half of the month
- Polyether polyol prices are flat week-on-week in China

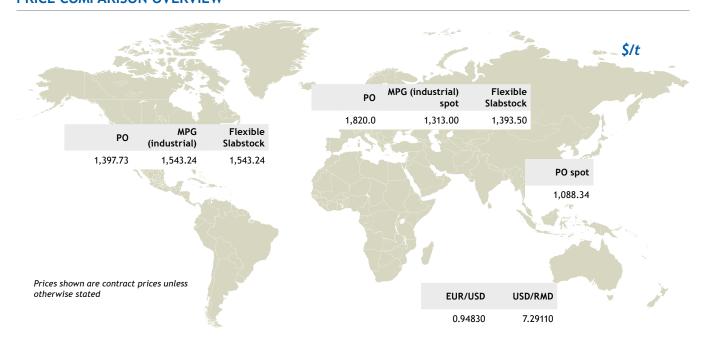
Contract prices					
	Timing	Low	High	Mid- point	Month-on- month delta ±
US					¢/lb
PO*	Sep 23	-	-	63.4	+3.4
Flexible Slabstock Polyether Poyol	Sep 23	65	75	70.0	nc
MPG (industrial)	Sep 23	65	75	70.0	nc
MPG (USP/EP)	Sep 23	70	75	72.5	nc
Europe					€/t
PO*	Sep 23	-	-	1,698	+48
Flexible Slabstock Poly- ether Poyol	Sep 23	1,250	1,350	1,300.0	+50.0

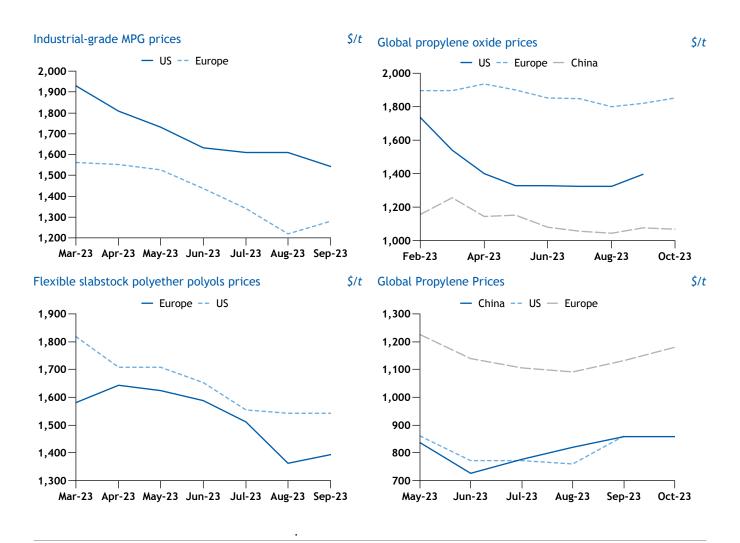
^{*} Delta calculated from the contract price rather than assessed

Spot prices					
	Timing	ng Low High		Mid- point	Week-on- week delta ±
Europe					€/t
MPG (industrial) del	spot	1,250	1,300	1,275.0	+50.0
MPG (USP/EP) del	spot	1,375	1,425	1,400.0	+50.0
\$/t					
MPG (industrial) import cfr	spot	1,150	1,250	1,200.0	+50.0
China					CYN/t
PO del	prompt	9,750.00	9,850.00	9,800	+75

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PRICE COMPARISON OVERVIEW





Crude

Crude futures have stepped higher this week from a week earlier, supported by concerns over wider fallout from Gazabased Islamist group Hamas' large-scale attack on Israel on 7 October. But prices nonetheless remain lower than in late September, as they had been steadily sliding this month until the latest conflict in the Middle East prompted some supply uncertainty.

Fundamentals support the price decline. Opec+ crude production rose by 510,000 b/d to 41.24mn b/d in September, marking the alliance's largest monthly output increase in a year, according to *Argus* estimates.

US exports of crude in the first half of the year averaged 3.99mn b/d, the highest since the US ended its ban on oil exports in 2015, according to the US Energy Information Administration (EIA).

Naphtha

US differentials for heavy and full-range N+A naphtha barges were lower on 10 October in line with persistently thin demand and a slight uptick in the Gulf coast gasoline values. Naphtha arbitrage out of the Gulf coast is closed, thus diminishing demand from usual exporters.

In Europe, gasoline and petrochemical demand for naphtha have fallen, helping naphtha stocks in Amsterdam-Rotter-dam-Antwerp (ARA) to expand by almost 30pc to 220,000t. Higher stocks combined with weak demand and the low Ice Brent contract price have weighed on naphtha prices.

Asian first-half December delivery naphtha prices rose by less than Ice Brent crude values on 10 October, as margins have weakened this week. More Russian-origin naphtha is making its way to Asia. About 356,000 b/d of Russian naphtha has arrived or is due to arrive in the region in October, up from 306,800 b/d in September, according to preliminary Vortexa data.

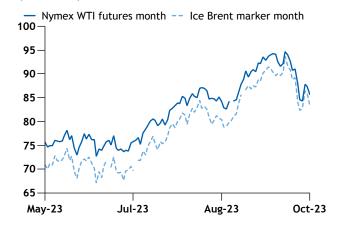
Propylene

The traded range for polymer-grade propylene (PGP) for prompt-month delivery at the Enterprise Products Partners (EPC) system at Mont Belvieu, Texas, fell slightly this week. But prices are on the rise with multiple market participants saying that Enterprise's 750,000 t/yr propane dehydrogenation (PDH-2) unit in Mont Belvieu, Texas, shut down unexpectedly last week.

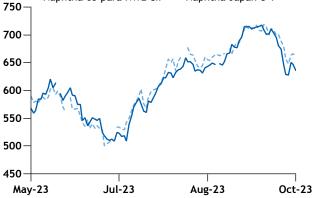
The European propylene market shows tentative signs of an improved balance. Spot discounts to the monthly contract price (MCP) have narrowed and discounts of 40pc are rarer, at least for PGP. But short-term production issues are contributing to the narrower discounts and any improvement

Nymex WTI price

\$/bl







Crude			\$/bl
	Effective Date	Price	±
ICE Brent	Dec 23	87.38	-0.46
Nymex WTI	Nov 23	85.64	-0.53

Naphta			\$/Ы
	Effective Date	Price	±
65 para NWE cif	prompt	646.250	-3.750
Japan c+f	prompt	665.625	+1.625

Propylene		\$/t
	Timing	Midpoint
US Poly grade USGC contract	Sep 23	39.000
Western Europe poly grade NWE contract	Oct 23	1,120.000
Propylene polymer grade cfr Northeast Asia	prompt	865.000



RELATED MARKETS

in the balance must be seen in the context of a managed supply situation with a number of crackers offline to manage weak demand and product balances.

Asian propylene prices fell because of losses in crude futures last week. Weakening downstream sentiment and lower polypropylene (PP) futures also weighed on propylene prices, resulting in limited buying interest.

Styrene

US Styrene monomer prices held steady in the week ending 6 October as liquidity was thin and buying and selling ideas remained wide. Destocking efforts have begun early in the fourth quarter for some consumers. The US styrene arbitrage with Europe was open on paper, but traders noted that weak demand in the region capped export opportunities.

European spot styrene prices retreated for the fifth consecutive week in the week to 5 October, under pressure from ample supply and steep falls in feedstock benzene values. Domestic styrene output grew in October as most of the production units started up following a spate of disruptions and shutdowns in the third quarter.

Asian styrene prices fell over the past week before ticking higher in the last session. Activity remained thin because of Chinese public holidays.

MTBE

US spot prices for gasoline additive MTBE fell for the third consecutive week in the week to 6 October. US MTBE production continues to increase and prices are starting to reflect the added supplies. MTBE production margins remain favourable and should encourage US MTBE producers to run as hard as they can.

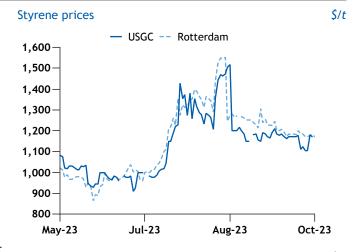
European MTBE prices remain at very high levels this week which could encourage incoming shipments, potentially from the US but US supplies are still in a rebuilding mode.

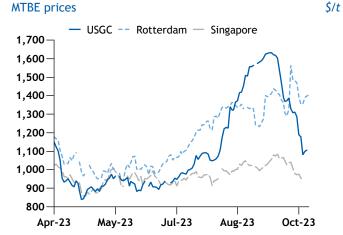
In Asia MTBE prices decreased and in the short term are expected to weaken further because of a seasonal lull in demand. While there is still demand for MTBE into November amid tight supplies, it is likely that this demand will drop with the advent of winter.

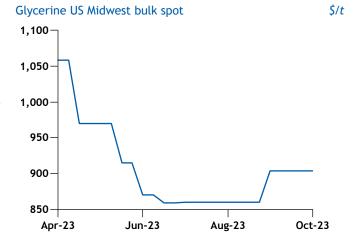
Glycerine

In the US, demand from polyols and agriculture continues, as well as some seasonal demand of holiday products, lending some support to prices for ongoing discussion of fourth quarter contract settlements.

Refined glycerine prices in Europe have been stable to soft as demand is still weak and the market continues to be







quiet. A wide range of prices was heard in different regions in Europe.

Some oleochemical producers in southeast Asia are heard to be running at around 70-80pc of capacity, and it is likely that rates across the other producers will move down in the coming weeks as numerous maintenance shutdowns are expected into November.



MARKET COMMENTARY

US

Propylene Oxide (PO) demand continues to be steady as market participants look to how propylene will move in November contract pricing. So far price settlement messages are mixed as it is still early in the month.

There has been pressure on propylene prices resulting from upsets at propane dehydrogenation (PDH) units in September and rolling into October. As of publication, a PDH unit in Mont Belvieu, TX is believed to be restarted and no other PDH disruptions have been reported.

In PO, a Texas producer that has been under force majeure since end of August is heard to have lifted the order. Another producer is understood to be performing maintenance at its PO plant in Louisiana that is expected to go on for the rest of the month. But currently no worries of supply constraints have been heard in the market.

Suppliers of PO derivatives including propylene glycols (PG) and polyether polyols have been heard to be mixed on pricing. Some are seeking increases in the month ahead to retain their margin position and others are rolling September pricing. One major propylene glycol producer has announced a price increase of 4¢/lb for October for both industrial and USP grades, while another has announced a price rise of a couple cents, but this increase is due to an uptick in demand for glycerin, according to market participants.

There have also been price increase announcements in the market for polyether polyols in October. However, one supplier was heard to be offering lower prices compared to September. The market is balanced with adequate supply and market participants are not expecting much change in October.

In trade flows, PO exports from the US jumped up by 36pc to 46,551t in August compared to the month before, according to data from Global Trade Tracker (GTT). The main export destination was China in August, based on the latest data. Exports of PO from the US has been steadily increasing through the summer months (see export chart).

US PG exports also grew in August, rising by 25pc to 12,683t from July's 10,107t, according to GTT data. Exports of PG have been increasing through the summer months. US imports of PG took a step up in August to 986t from 721t reported in July. This is the first reported pick up in PG imports since May, based on GTT data.

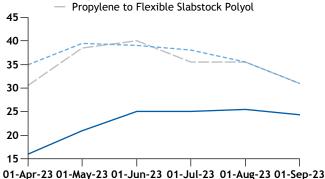
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^{*} Delta calculated from the contract price rather than assessed

US price spreads to propylene

¢/lb

Propylene to Propylene OxidePropylene to Mono Propylene Glycol



50,000 40,000 30,000 20,000 Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec 2021 2022 2023 – GTT

MARKET COMMENTARY

Europe

The October European propylene oxide (PO) contract price rose by €48/t, following the increase in the settlement of the European propylene monthly contract price for October. This rise in PO's key precursor propylene, and resulting increase in PO's cost position, was the main driver for suppliers' pricing ideas for propylene glycols and polyether polyols this month. Suppliers have approached customers with price increases both in the propylene glycol spot market and for the October monthly contract price for flexible polyether polyols.

Raw material input costs have climbed in line with two consecutive months of price increases for ethylene and propylene, while the spot price for co-product styrene has retreated from its August peak. The input cost minus the co-product credit has climbed in the past two months to its highest since June, at €1,010/t, before taking into account fixed costs and other variable costs such as utilities, or the PO credit.

A major PO/TBA unit in Botlek is down for planned maintenance until December. A fire at AVR's waste-water treatment plant in Rozenburg a few weeks ago has constrained the availability of waste-water treatment, affecting production across the chemical cluster at the site. Two of the major POSM units at Moerdijk are running at reduced rates as a result. Associated downstream production of polyether polyols, propylene glycols and P-series glycol ethers has also been affected for these producers, which could tighten availability of these derivatives in the short term.

Another major producer in Spain is expected to undertake two weeks of maintenance affecting polyether polyols output, which could further limit the availability of this product in October.

Propylene glycol offtake has picked up slightly in the first half of October as a result of restocking activity. Suppliers' attempts to implement price increases have achieved some success. The MPG industrial-grade price range moved up by €50/t to €1,250-1,300/t this week, while the premium for USP/EP grade is unchanged at €125/t, with the USP/EP range assessed at €1,375-1,425/t. Although not formally assessed, the price of DPG has climbed by €50/t, and is reported at €1,600/t.

For flexible slabstock polyether polyols, preliminary indicators for the October contract price ahead of next week's assessment range from rises of €50-100/t, with the majority of discussions indicating increases of around €70-80/t.

Some supply constraints are anticipated in the coming weeks for polyether polyols, but demand for flexible slab-

Contract prices					€/t
	Timing	Low	High	Mid- point	Month- on-month delta ±
PO*	Sep 23	-	-	1,698	+48
Flexible Slabstock Polyether Polyol	Sep 23	1,250	1,350	1,300.0	+50.0

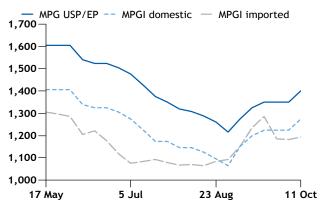
^{*} Delta calculated from the contract price rather than assessed

European spot prices												
	Timing	Low	High	Mid- point	Month- on-month delta ±							
MPG (industrial) del €/t	spot	1,250	1,300	1,275.0	+50.0							
MPG (USP/EP) del €/t	spot	1,375	1,425	1,400.0	+50.0							
MPG (industrial) import cfr \$/t	spot	1,150	1,250	1,200.0	+50.0							

MPG monthly average prices											
	Month	Low	High	Mid- point	±						
MPG, industrial	spot	1,165.00	1,177.50	1,171.25	+9.59						
MPG, USP/EP	spot	1,293.75	1,306.25	1,300.00	+8.34						

Europe Propylene Glycol Prices

€/t



stock polyether polyols remains flat compared with September. In the comfort sector, inventories are relatively high, particularly downstream at bedding and furniture manufacturers and sellers. This is leading to a slowdown in polyure-thane foam orders in October as downstream manufacturers look to use existing stocks.



MARKET COMMENTARY

Asia

The Chinese propylene oxide (PO) price softened this week after the market returned from the Golden Week holiday. The drop in the PO price was aligned with a slight fall in prices for feedstock propylene and downstream derivative polyether polyols.

Demand is still sluggish as buyers are cautious about replenishing stocks, and are adopting a hand-to-mouth approach in the view that Chinese PO prices could weaken further, in line with declines in the propylene price.

Spot PO trades in east China were mainly done in the range of Yn9,400-9,550/t delivered as of 11 October, equivalent to \$1,089/t on an import parity basis.

Import prices also fell this week owing to ample supply. Offers were quoted at \$1,100/t cfr China compared with \$1,130/t cfr China before the holidays. Sporadic deals were concluded at slightly below \$1,100/t cfr China as well.

Domestic supply is expected to increase soon. Tianjin Bohua is restarting its 200,000 t/yr PO plant after bringing back production at its upstream MTO unit on 9 October, although no on-specification PO had been produced as of 11 October. Shandong Jincheng is expected to restart its 300,000 t/yr PO unit by late October, according to market participants. The average run rate of the Chinese PO industry remained around 68pc this week, above the year-to-date average rate of 64pc.

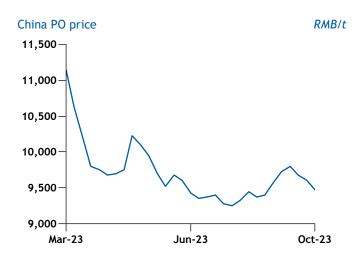
PetroChina Guangxi Petrochemical has started building a propylene oxide styrene monomer (POSM) unit in Qinzhou, Guangxi province. The POSM unit will have a capacity of 270,000 t/yr of PO and 600,000 t/yr of styrene. PetroChina is aiming for start-up in mid-2026.

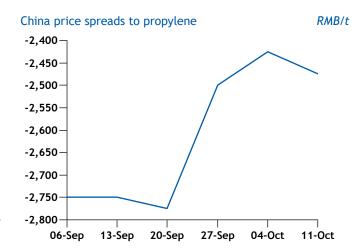
PO production margins dropped this week owing to a rise in chlorine prices, which outweighed the relatively small declines in feedstock propylene prices. Non-integrated chlorohydrin PO margins in China narrowed to Yn645/t, or \$88/t, this week, down by Yn270/t from two weeks ago, and well below the year-to-date average of Yn1,669/t.

Shell Singapore on 10 October shut its POSM unit on Jurong Island after a fire. Operations at Shell's upstream naphtha cracker were not affected by the fire, a market source said. The cause of the fire was not disclosed, and it remains unclear when Shell will restart the POSM unit. The firm's downstream production of polyether polyols and propylene glycols could be affected.

Downstream, flexible slabstock polyether polyols offtake remains sluggish, and supply remains adequate to meet domestic demand. The price is unchanged this week at Yn10,200-10,400/t.

China dome	stic		Yn/t
	Basis	Price	±
PO	del	9,800	+75





Propylene glycols demand has picked up from customer restocking activity in China and the wider region, after demand for industrial-grade monopropylene glycol (MPG) had retreated before the Golden Week holiday last week. Producers in China and throughout Asia have approached customers with price increases for October business over the past week, and these have passed through for MPG USP/EP grade and dipropylene glycol (DPG) as a result of tighter availability of these products. MPG USP/EP grade imported to China has risen to \$1,250-1,300/t cfr for October, while DPG is at around \$1,400/t cfr. Offers for industrial-grade MPG imports to China are stable at around \$1,050-1,100/t cfr. Chinese export offers for industrial-grade MPG are heard at around \$1,000-1,050/t fob.

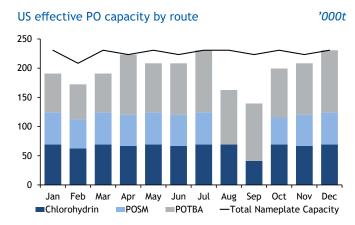
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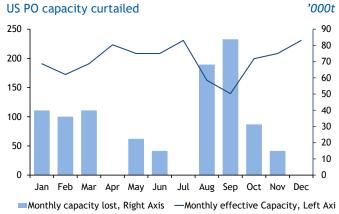
CAPACITY AVAILABILITY

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Plant capacity and availability information is an estimate made by Argus and should not be treated as confirmed or verified by producers

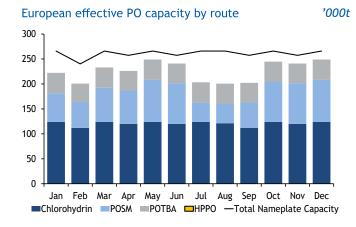


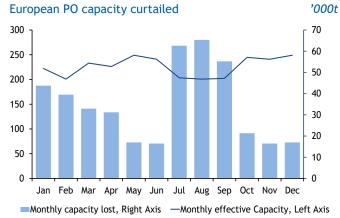


CAPACITY AVAILABILITY

2023 Europe P	O Capacity C	urtailed															'000t
Company	Location	Technology	Name- plate Capacity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	2023 Capacity Lost	2023 Effective Capacity
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CAPACITY AVAILABILITY

2023 North Ar	merica Propylene (Glycol Capacity	Curtaile	d												'000
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CAPACITY AVAILABILITY

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2023 Europe P	olyether Polyols C	apacity Curtailed														'000
Company	Location	Nameplate Capacity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	2023 Capacity Curtailed	2023 Effective Capacity
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NEWS

PetroChina Guangxi starts constructing POSM

PetroChina Guangxi Petrochemical has started constructing a propylene oxide-styrene monomer (POSM) unit on 8 October in Qinzhou city of southern China's Guangxi province. Continue reading >>

Shell Singapore shuts POSM unit after fire

Shell Singapore has on 10 October shut its propylene oxide styrene monomer (POSM) unit on Jurong Island after it was hit by a fire.

Continue reading >>

Asian naphtha cracker margins stubbornly weak

Asian naphtha cracking margins at ethylene plants remained negative last month with limited improvement after two years, owing to high feedstock costs, olefins oversupply and weak downstream demand on flagging Chinese economic growth.

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