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# Argus Toluene, Xylenes and Isomers / PET

Formerly Argus DeWitt Toluene, Xylenes and Isomers / PET

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## HIGHLIGHTS

### Americas

- Toluene price rose by 2¢/USG from last week to close at 357¢/USG with demand increasing for solvents moving into the new month.
- Mixed xylenes (MX) spot price rose slightly this week, up by 1¢/USG compared to last week with more interest from buyers
- PET Fiber prices are in the range of 84.5¢/lb to 95.0¢/lb
- Reformat - PX spread increased \$26/t and at \$117/t amid declining reformat prices.
- PTA-PX spreads strengthened amid plants opting for reduced operating rates.

### Europe

- North Sea Dated crude eased towards \$80/bl early on; Naptha margins supported by lack of Russian imports; Gasoline blending economics weaken.
- BASF plans to shut its 300,000 t/yr TDI unit in Ludwigshafen, Germany.
- PX prices held relatively steady.
- The February OX CP was confirmed at a rollover.
- European PET fiber margins remain pressured.

### Asia-Pacific

- Toluene prices edged higher alongside tighter supplies.
- MX prices retreated following dips in crude futures.
- OX prices increased as Chinese demand for April deliveries rose.
- PTA traded higher following firmer PTA futures.
- MEG prices rose following firmer MEG futures as well as higher feedstock ethylene prices.

## MARKET SNAPSHOTS

Americas					\$/t
	Timing	Low	High	±	
Toluene nitration grade fob USGC spot	Feb	1,084.21	1,084.21	+6.07	
Toluene nitration grade fob USGC spot	Mar	1,069.02	1,129.76	-37.96	
Toluene commercial grade fob USGC spot	Feb	1,002.21	1,006.95	-31.37	
Mixed xylenes fob USGC spot	Feb	1,081.69	1,081.69	-9.14	
Mixed xylenes fob USGC spot	Mar	1,066.45	1,157.86	-36.57	
Paraxylene fob USGC spot	Feb	1,205.03	1,235.02	-4.96	
Paraxylene fob USGC spot	Mar	1,205.03	1,235.02	-4.96	
Paraxylene USGC contract	Jan	1,344.82		nc	

Europe					\$/t
	Timing	Low	High	±	
Toluene TDI-grade fob NWE spot	Mar	1,015.00	1,080.00	-15.00	
Toluene nitration-grade cif ARA spot	Mar	975.00	1,030.00	-27.50	
Mixed xylenes fob NWE spot		975.00	1,030.00	-22.50	
Paraxylene fob NWE spot		1,165.00	1,190.00	-2.50	
Toluene NWE contract	Dec	977.00	977.00	nc	
Paraxylene NWE contract €/t	Nov	1,230.00		nc	

Asia-Pacific					\$/t
	Timing	Price		±	
Toluene fob S Korea		905.00		+20.00	
Toluene cfr China		925.00		nc	
Mixed xylenes isomer fob S Korea marker		938.30		-19.20	
Mixed xylenes isomer cfr Taiwan marker		961.30		-21.60	
Paraxylene fob S Korea marker		1,001.07		-4.46	
Paraxylene cfr China marker		1,019.07		-4.46	
Paraxylene cfr southeast Asia marker		1,009.07		-4.46	
Paraxylene cfr Asia contract price	Mar	870.00		nc	

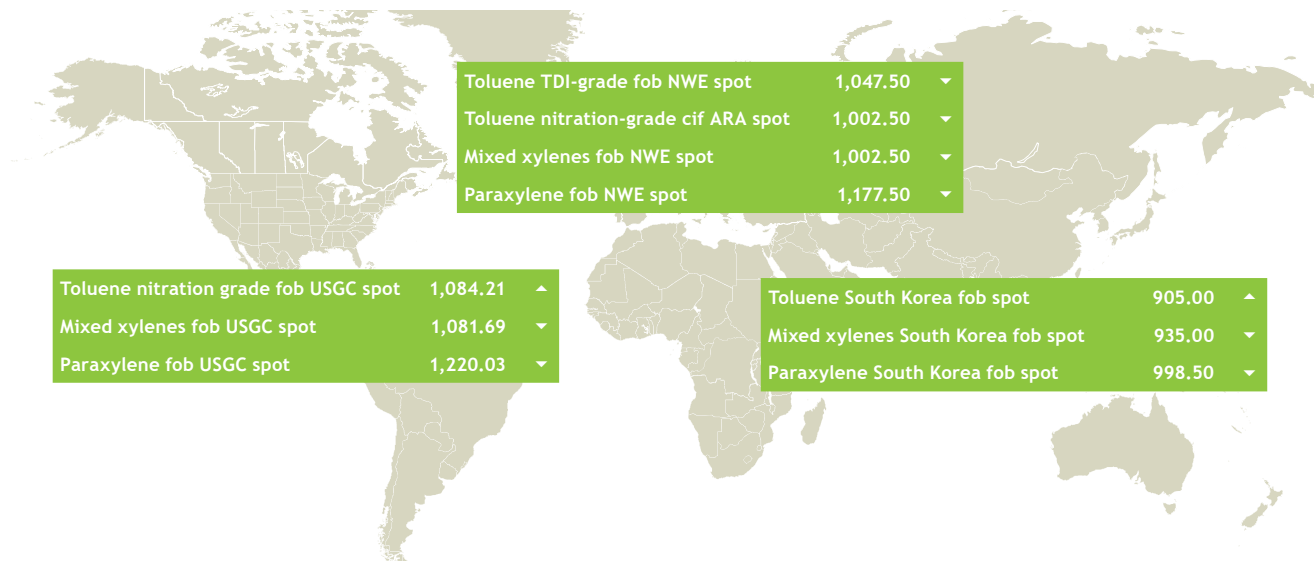
Related markets					
	Timing	Price		±	
Nymex Rbob ¢/USG	Mar	235.87		-2.08	
Nymex WTI \$/bl	Apr	75.36		-0.03	
Ice Brent \$/bl	Apr	82.23		+0.64	
Gasoline 87 M conv Colonial ¢/USG		236.64		+0.28	
Gasoline 93 V conv Colonial ¢/USG		260.39		-0.72	
Gasoline 83.7 Rbob Colonial ¢/USG		228.52		-0.47	
Gasoline 91.3 Rbob Colonial ¢/USG		247.39		-1.59	

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GLOBAL PRICES

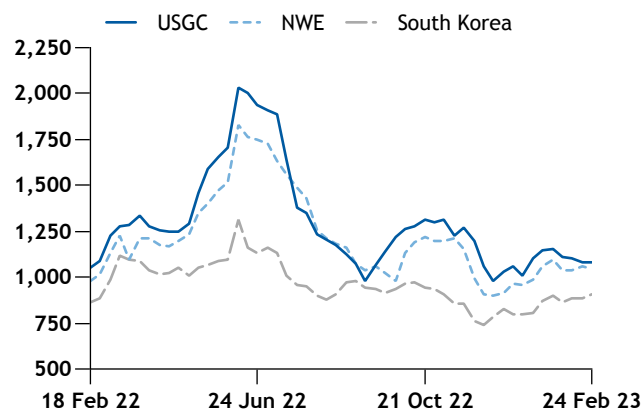
\$/t



Alternative values		
	€/USG	\$/t
<b>Americas toluene</b>		
Conventional blend value	330.31	1,003.15
Rbob blend value	304.60	925.07
HDA contract	285.89	868.26
HDA spot	303.10	920.50
TDP contract	336.91	1,023.19
TDP spot	349.22	1,060.59
STDP contract	366.06	1,111.71
STDP spot	365.37	1,109.64
<b>Americas mixed xylenes</b>		
Conventional blend value	345.47	1,052.65
Rbob blend value	314.68	958.83
<b>Europe toluene</b>		
Blend value	280.85	852.95

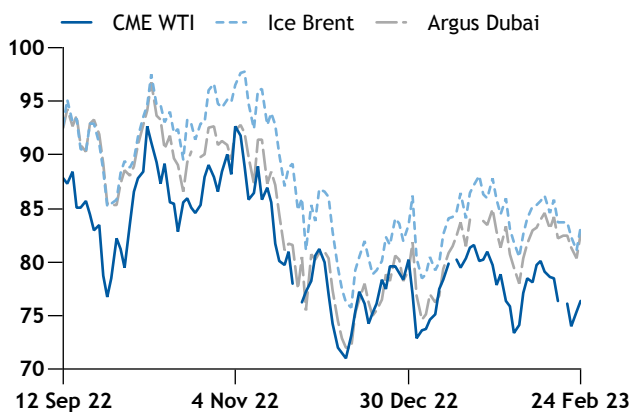
Global toluene prices

\$/t



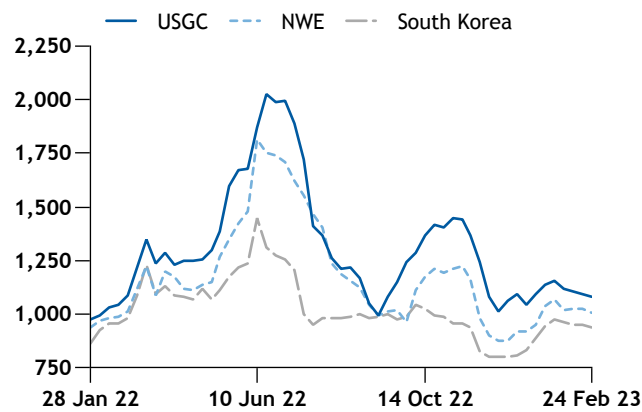
Global crude prices

\$/bl



Global mixed xylenes prices

\$/t



## AMERICAS

## Crude and gasoline

Refinery utilization remains muted while diesel restocking slowly carries on. US crude runs remained muted as refineries continue planned maintenance activities before demand picks up in the spring.

March RBOB gasoline futures fell by about 5¢/USG to finish the week at 235.87¢/USG. Further along the forward curve, April RBOB futures fell to 258.14/USG, down by over 4¢/USG from last week and at a 22.27¢/USG premium over March RBOB futures. Conventional gasoline at the colonial pipeline declined to 268.87¢/USG this week from close on 17 January at 277.07¢/USG. Regrade for conventional gasoline fell to 27.75¢/USG.

In blendstocks, reformat decreased by 1.68¢/USG this week to close at 301.14¢/USG. Toluene RBOB blend value fell to 304.60¢/USG and MX RBOB blend value fell to 314.68¢/USG. Alkylate fell by almost 3¢/USG to close at 267.64¢/USG. Heavy naphtha increased by almost 3¢/USG week-over-week to close at 188.64¢/USG. Raffinate moved down by about 2¢/USG to close at 192.64¢/USG on the week.

On hydrocarbon supply and processing, total US crude inventories, excluding SPR, rose by 7.6mn bl to 479mn bl. Non-SPR inventories are now 63mn bl or over 15pc above year ago levels. US domestic net crude supply fell by about 1.4mn b/d upon unchanged production rates and net higher exports. Imports rose by 0.1mn b/d to 6.3mn b/d while exports increased by 1.45mn b/d to 4.6mn b/d. On refining operations, runs decreased by 0.1mn b/d to 15.5mn b/d, with average utilization down by 0.6 percentage points at 85.9pc. Average gasoline yield across the US rose by 5.5 percentage points to 57.3pc, with actual production volume up by 0.3mn b/d at 9.4mn b/d. Implied gasoline demand was also up by 0.6mn b/d to 8.9mn b/d. Inventories fell by 1.9mn bl to 240.1mn bl. Inventory cover was about two days lower at 27 days of use at current consumption levels. Gasoline component inventories fell by 0.5mn bl to 30.3mn bl and remain 2.5mn bl or 7.5pc below year ago levels. Diesel inventories were up by 2.7mn bl at 121.9mn bl but remain 35.7mn bl or 22.7pc below year ago levels. Jet inventories are up by 0.8mn bl at 37.3mn bl. Fuel oil inventories moved down by 0.6mn bl and are down by 9.1mn bl or 3.9pc from year ago levels.

On costs across the hydrocarbon complex, oil prices have been pressured this week with reports from the Federal Reserve suggesting the central bank will increase interest rates, lowering the demand for crude oil. Specifically on US crude

Americas physical market weekly prices				
	Timing	Low	High	±
<b>Toluene ¢/USG</b>				
Nitration grade USGC fob spot	Feb	357.00	357.00	+2.00
Nitration grade USGC fob spot	Mar	352.00	372.00	-12.50
Commercial grade USGC fob spot	Feb	330.00	331.56	-10.33
TDI grade contract	Jan	342.80	387.50	nc
<b>Mixed xylenes ¢/USG</b>				
USGC fob spot	Feb	355.00	355.00	-3.00
USGC fob spot	Mar	350.00	380.00	-12.00
<b>Paraxylene ¢/lb</b>				
USGC fob spot	Feb	54.66	56.02	-0.23
USGC fob spot	Mar	54.66	56.02	-0.23
USGC contract	Jan		61	nc
<b>Orthoxylene ¢/lb</b>				
USGC contract	Feb		55	nc
<b>Related assessments ¢/lb</b>				
PA molten contract	Feb	74.50	81.50	nc
PTA USGC contract cfr	Jan		58.86	nc

Americas physical market monthly averages				¢/USG
	Timing	Average	±	
<b>Toluene</b>				
Nitration grade USGC fob spot	Dec	339.75		
	Jan	363.1		
	Feb*	358.17	-0.58	
<b>Mixed xylenes</b>				
USGC fob spot	Dec	347.75		
	Jan	363.73		
	Feb*	358.5	-1.75	

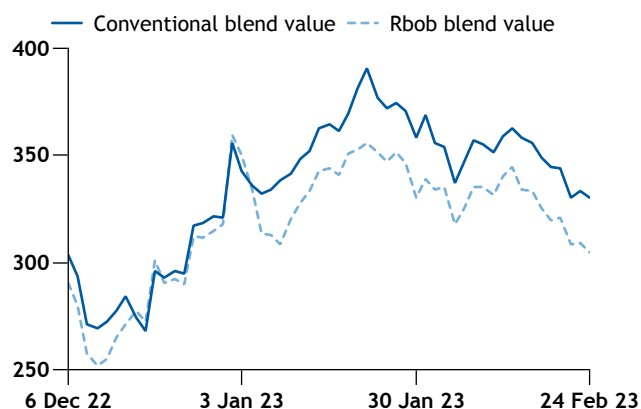
\*MTD until week of settlement

futures, the front-month WTI (Nymex) benchmark has traded generally lower through the week. From the last reporting week's close at \$78.49/bl, futures fell under \$76.40/bl rolling into the long weekend, by midweek futures fell to just under \$74/bl. The market contract ended the reporting week Thursday at nearly \$75.40/bl, down by over \$3/bl from our last report. Cash market crude prices (WTI, Houston) have fallen by over \$3/bl from last week's close at \$81.04/bl to end Thursday at about \$77.80/bl. On gasoline, Rbob futures have fallen this week from last week's close at 243.55¢/USG. Going into the weekend, Rbob futures fell to about 240.8¢/USG and by midweek fell under 233.8¢/USG. A slight rebound gave Rbob futures a closing value on Thursday at almost 238¢/USG - a reduction of over 5.5¢/USG on the week. Cash market gasoline

## AMERICAS

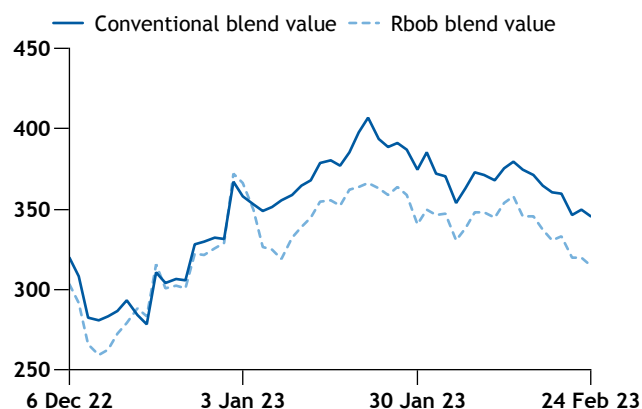
## Toluene blend values

¢/USG



## Mixed xylenes blend values

¢/USG



prices (conventional, 87 Houston) continued to fall this week from last week's close at 248.925¢/USG. Going into the weekend, cash prices fell to about 245.3¢/USG and by midweek were under 235.4¢/USG. Prices closed today (Thursday) at about 237.6¢/USG, down by over 11¢/USG from last week. On gasoline blending, octane-based alternative values for aromatic conversion feed finished on the week. The reformat spread over unleaded (conventional) rose from last week's close of 57.87¢/USG to exactly 58.75¢/USG going into the weekend. By midweek the spread climbed to over 63.10¢/USG and closed Thursday at about 86.6¢/USG, almost a 29¢/USG increase from last week. Absolute reformat market values (waterborne, Houston) have fallen from last week's close of 305.55¢/USG. Going into the weekend, reformat prices fell by almost 3¢/USG to close at about 302.8¢/USG and then by midweek fell under 297.30¢/USG. Reformat closed Thursday just under 301.5¢/USG for about a 4¢/USG decrease on the week. Lastly, natural gas futures (Nymex) continued to fall this week from last week's close at \$2.389/mmBtu. Futures fell under \$2.3/mmBtu going into the weekend and slid to about \$2.17/mmBtu by midweek. Natural gas futures closed Thursday at about \$2.31/mmBtu, about a 9¢/mmBtu decrease from last week. In cash market natural gas (all-day ahead, Houston), prices ended down on the week from last week's close of \$2.25/mmBtu. Prices fell to about \$1.75/mmBtu going into the weekend and slid under \$1.7/mmBtu by midweek. Prices closed Thursday at nearly \$1.85/mmBtu, over a 40¢/mmBtu drop from last week.

## Toluene

Toluene prices rose by 2¢/USG from last week to close at 357¢/USG with demand increasing for solvents moving into the new month.

Toluene spot prices increased this week despite a down week for reformat and gasoline futures. There was conversation and activity this week for February and March barrels of toluene with an increase in demand from buyers looking to toluene for solvent purposes, rather than for running selective toluene disproportionation (STDP) and TDP units or for downstream paraxylenes production.

Nitration-grade toluene (NGT) traded for February ddp Houston - Texas City (HTC) with a volume of 20,000 bl valued at 357¢/USG. Commercial-grade toluene (CGT) traded for February ddp HTC with a volume of 20,000 bl valued at a 90¢/USG premium over March Rbob futures on Tuesday, equaling out to 331.56¢/USG. February CGT ddp HTC also traded this week with a volume of 25,000 bl for expedited delivery from 22 February through 24 February valued at 330¢/USG, bringing the weekly CGT price to 330.78¢/USG.

Margins for STDP were negative on the week with the low end at -21.1¢/USG and the high end at 10.5¢/USG for the week ending 24 February. STDP rates finished negative, indicating that units should not be running heading into March.

The toluene arbitrage between the US Gulf coast (USGC) and Europe is closed on paper with prices nearly at parity and no room to cover shipping costs.

## AMERICAS

### Mixed xylenes

Mixed xylenes (MX) spot price rose slightly this week, up by 1¢/USG compared to last week with more interest from buyers.

MX spot prices rose this week with more interest in the market for March delivery. Reformate and Rbob futures were both down most of the week, but interest was strong from solvents and chemicals buyers. There was also some interest in lower-grade MX for blending purposes late in the week.

MX prices increased by 1¢/USG the week ending 24 February. MX traded earlier this week for February ddp HTC with a volume of 10,000 bl valued at 355¢/USG, setting the weekly price.

The spread between 5211-grade MX and 843-grade MX increased to about 25¢/USG with more demand in higher-grade MX from buyers outside of the gasoline blending pool.

On arbitrage trade, the spread between USGC and European MX is about \$155/t, the arbitrage is open on paper with stronger prices in the US.

### Orthoxylene

OX CP for March is expected to trend lower with feedstock prices.

Declining energy costs in recent weeks are expected to pressure the OX CP settlement for next month. The OX-naphtha spread increase in recent weeks will push a lower price settlement amid lower naphtha prices. Lower refinery operating rates will have impact on supply and will support the current floor price.

The OX-MX price spread is at 9¢/lb and was in the range of 7¢/lb to 9¢/lb for the last four weeks amid declining crude prices. The spread is expected to be stable and will then trend downward amid higher fuel demand. The OX-naphtha price spread has been almost flat in the range of 22¢/lb to 24¢/lb in the the last four weeks amid declining feedstocks.

The US economy is expected to surpass the recession fears in the coming months. A strong February job report, declining energy costs and continued action on taming inflation is expected to guide the Fed on resorting to some less aggressive interest rate increases in coming months.

In 2022, total construction spending was \$1,792.9bn, 10.2pc above the \$1,626.4bn spent in 2021. The value of private construction in 2022 was \$1,429.2bn, 11.7pc above the \$1,279.5bn spent in 2021. Residential construction in 2022 was \$899.1bn, 13.3pc above the 2021 figure of \$793.7bn, and nonresidential construction was \$530.1bn, 9.1pc above the \$485.8bn in 2021.

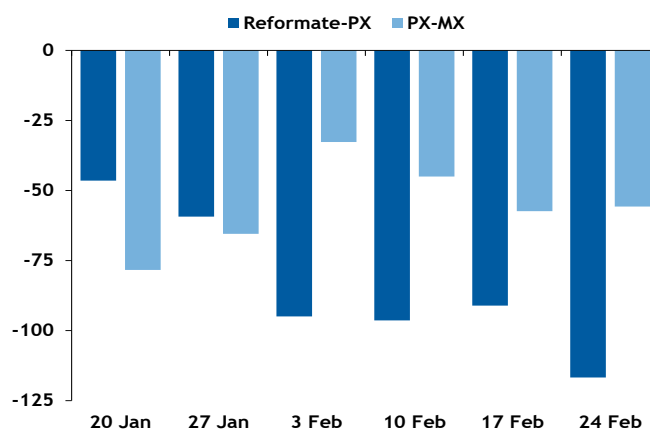
### Paraxylene

Reformat - PX spread increased \$26/t to \$117/t amid declining reformat prices.

The PX price was flat this week amid stable crude prices. US refinery utilization continue to be in the range of 85pc to 87pc capacity as refineries are getting ready for spring and summer demand and going through maintenance schedules. The present reduced refinery operating rates are supporting the current floor price amid a tight market. Strong chemical demand continues to support PX prices. STDP conversion margins continue to improve since the last few weeks. Higher octane demand in spring and summer will be supporting the feedstock prices. The price in spring is expected to get support from both chemical and fuel demand.

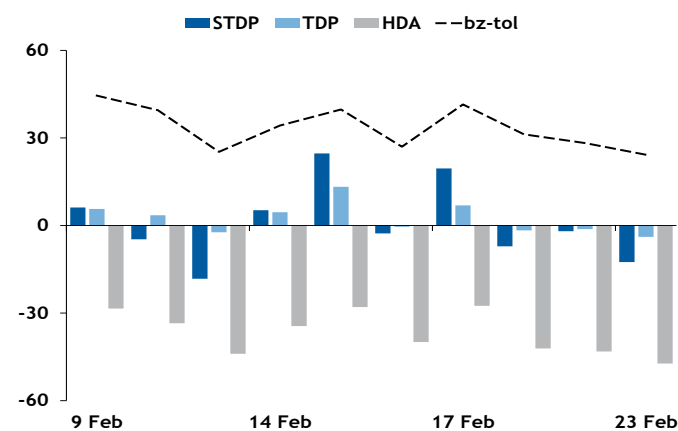
US reformat, PX and MX spreads

\$/t



Toluene conversion margins at BZ spot

¢/USG



## AMERICAS

The PX USGC CP still awaits settlement for February. The Europe netback price is estimated in the range of 55.45¢/lb to 55.68¢/lb for this week. The PX CP for February is expected to remain stable.

The PX naphtha spread has been trending downward on increasing naphtha prices. The PX-naphtha spread is in the range of \$391/t to \$318/t and is at \$319/t this week. Higher naphtha prices will reduce the spread further amid increased gasoline demand. The reformat - PX spread also increased \$26/t to \$117/t amid declining reformat prices. The PTA-PX spread was in the range of \$73/t to \$89/t and is expected to be in the range of \$80/t to \$100/t. PTA-PX declining spread has depressed margins and PET producers are encouraged to import PTA, weakening PX prices in the US.

Asia PX prices were in the range of \$1,000/t to \$1,018/t, while Europe PX prices were at \$1,178/t, down \$7/t amid declining feedstock prices. The PX price between NWE and Asia was the same as last week at \$178/t and is expected to decline further with declining crude prices.

Lower US refinery operating rates are expected to keep the PX market tight for the next few weeks. Increased PTA plant operating rates in Asia have improved the supply in the global market. PTA plants in China will be reducing operating rates in the coming weeks to help improve the PTA-PX spreads.

Estimated selective toluene disproportionation margins for the week were in the range of -7.1¢/USG to -12.5¢/USG. The average STDP margins were estimated at -7.2¢/USG. PX and benzene have been stable since last week despite softening supply. The prices next week are expected to improve amid continuation of supply tightness in the US domestic market.

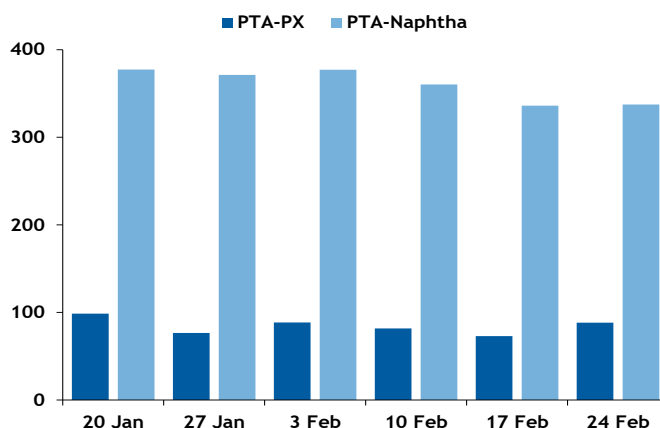
### PTA

PTA-PX spreads strengthened amid plants opting for reduced operating rates.

The PTA-PX spread recovered from \$73/t to \$88/t last week

PTA, PX, naphtha price spreads

\$/t



amid declining feedstock prices and improving supply in the global market. The PTA -PX spread is expected to improve in the coming weeks as rationalization of PTA plant operating rates are expected amid weaker margins.

PTA prices are in the range of \$1,039/t to \$1,053/t for the last four weeks. The prices are expected to increase, trending feedstock prices in the coming weeks. Plants are also expected to rationalize operating rates amid poor margins, supporting price increases.

The PTA-naphtha spreads are in the range of \$377/t to \$337/t for the last four weeks. The PTA-naphtha spread has declined by \$1/t since last week amid flat naphtha and PTA prices trending crude prices. The PTA -naphtha spread is expected to decline in the coming weeks amid stronger naphtha prices, as the fuel market meets spring gasoline demand.

US producers are opting to import PTA to meet domestic demand amid weakened margins. The increase in PTA-PX margins since last week is supporting the fact that producers are moving forward to run plants at optimum production rates and relying more on imports.

## EUROPE

### Crude and naphtha

North Sea Dated crude fell towards \$80/bl this week as the market weighed the pace of recovery of China's crude demand against Russia's plan to reduce production by 500,000 b/d next month. Prices also came under pressure from a 16.3mn bl build in US crude stocks to 471.4mn bl in the week to 10 February

as refinery runs slipped. Elsewhere, Kazakhstan's state-owned pipeline operator Kaztransoil has started accepting crude for delivery to Germany through the Druzhba pipeline system. It will move 20,000t to the Poland-Belarus border this month, for onward delivery to Germany.

Naphtha fell to \$713/t on 23 February, under pressure from



## EUROPE

falls in crude. But margins firmed, with naphtha rising to a premium to North Sea Dated on 22 February for the first time since April last year. European naphtha output is forecast to hit 13.6mn t this year with demand at 40.4mn t, leaving a net deficit of 26.8mn t, Argus calculates. Russia shipped 9.9mn t of naphtha to Europe in 2022, a nearly 40pc share of the import market. European buyers have looked to Spain and Algeria since Russia's action in Ukraine, picking up 5.5mn t from the pair in 2022, and they have been the primary import sources this year, Vortexa data show.

Gasoline fell to \$781.75/t on 23 February, before recovering above \$800/t by the end of the week. A tightening high octane component market is adding to blending costs and eroding gasoline economics. This coupled with high freight costs has made transatlantic arbitrage economics unworkable in recent sessions, weighing on European prices.

The euro reversed early gains against the US dollar, ending the week lower at \$1.057:€1.

### Toluene

BASF announced this week that it is to permanently shut down its 300,000 t/yr toluene diisocyanate (TDI) unit at Ludwigshafen in Germany as part of a major revamp at the site. The unit at the site has already been ramped down and will remain offline. The company cited high energy and utility costs and weak demand as the main factors behind its decision to close down the unit, less than a decade after starting it up in 2015. The closure will also affect TDI precursor plants for dinitrotoluene (DNT) and toluene diamine (TDA) at the site. "Demand for TDI has developed only very weakly especially in Europe, Middle East and Africa and has been significantly below

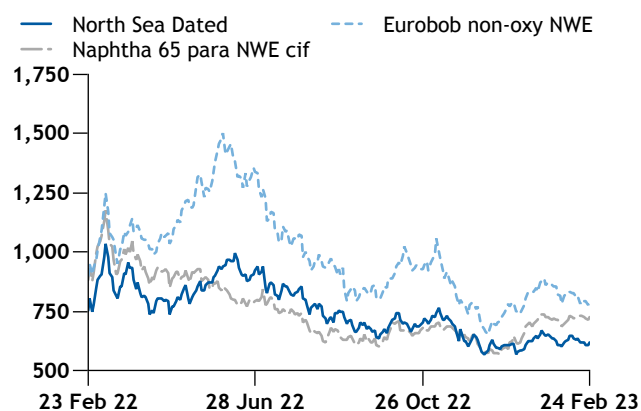
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Paraxylene NWE contract €/t	Nov		1,230.00	nc
Orthoxylene fob NWE spot \$/t		1,350.00	1,425.00	+12.50
Orthoxylene NWE contract €/t	Feb		1,360.00	nc
PA liquid contract €/t	Feb	1,655.00	1,675.00	nc
DMT NWE del contract €/t	Nov	1,110.00	1,140.00	nc
PTA NWE del contract €/t	Nov	965.00	980.00	nc
MEG cfr Europe contract €/t	Jan	790.00	790.00	nc

expectations," BASF said. BASF spent over €1bn (\$1.06bn) on the TDI project, which at that time was the company's largest ever investment at the site, as it pursued its aim of making the business a low-cost TDI producer in Europe.

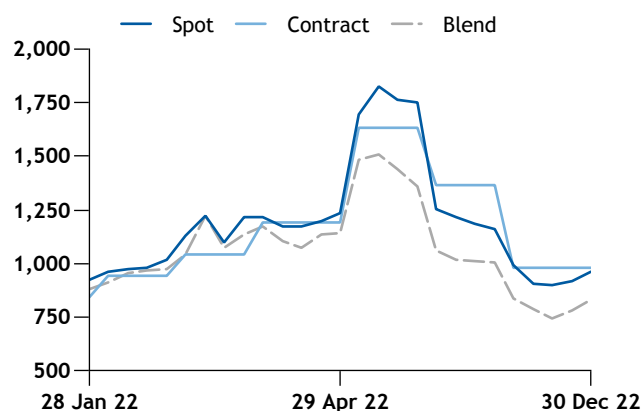
Customers in Europe will be supplied with TDI from the company's production sites in Geismar, Louisiana in the US, Yeosu in South Korea, and Shanghai in China. Europe had already seen increased TDI imports last year as high energy and competition for feedstock toluene from the gasoline pool weighed on production economics. Western Europe imported over 51,000t of TDI from east Asia in 2022, primarily from South Korea and China, almost doubling from a year earlier.

The shutdown of the unit will remove demand for 200,000 t/yr of toluene in Europe on paper, increasing Europe's structural long position. But the overall impact is likely to be less severe, with BASF's Ludwigshafen TDI unit struggling to sustain full commercial operations since it was brought on stream, hampered by technical problems, a damaged reactor, product

North Sea Dated, Eurobob and naphtha barge \$/t



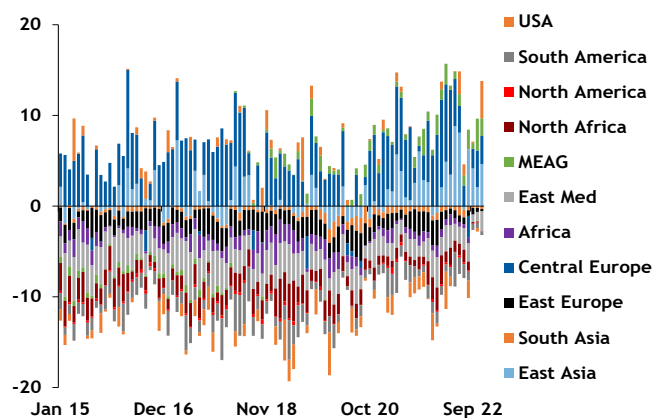
NWE Toluene contract, spot and blend \$/t



## EUROPE

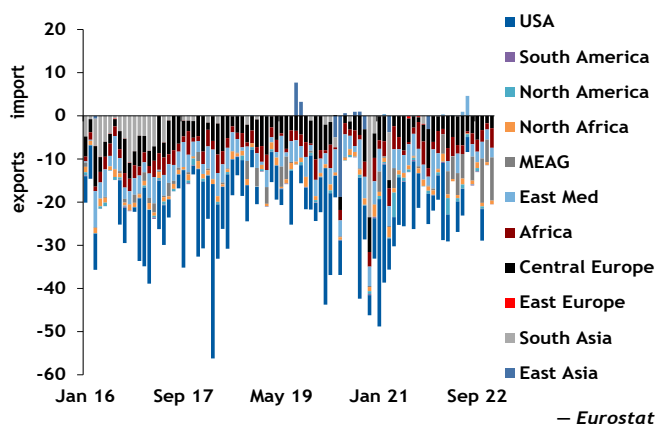
EU15 TDI monthly trade data

'000t



EU15 monthly toluene trade data

'000t



— Eurostat

quality issues and Rhine river-related logistical bottlenecks. Western European toluene net exports totalled just over 300,000 t/yr in 2020-2021, falling to 237,000t last year on reduced domestic production and firm octane demand. The shutdown of Galp's 140,000t/yr toluene unit in 2021 and Versalis' 50,000t/yr Porto Marghera unit last year had reduced some length in the European market, leading to expectations of increase competition between domestic demand and exports. But the shutdown of BASF's TDI unit now more than compensates for recent European toluene closures.

The company expects to reduce fixed costs by more than €200mn/yr and as part of the changes will also reduce adipic acid production capacity and close down the cyclohexanol, cyclohexanone and soda ash units at Ludwigshafen. Adipic acid production at BASF's joint venture with Domo in Chalampe, France, will continue and has sufficient capacity to supply the business in Europe. The polyamide 6.6 unit at Ludwigshafen, which requires adipic acid as an input, will continue to operate. The measures will be implemented stepwise by the end of 2026.

In the spot market, toluene prices tracked the volatility in the gasoline market and reversed mid-week losses.

TDI-grade material was discussed at a wide \$240-270/t premium to March gasoline swaps in a thinly traded market. Demand from consumers was muted, with recent interest mainly from producers who have been keeping extraction rates low and stepping into the spot market to cover their contractual obligations.

Export interest has eased recently following a tightening of the European market. But firm March US pricing and a heavy spring refinery maintenance season in the US could lead to

increased demand along the route next month.

European refinery rates had risen above 85pc in December and January but are expected to ease as the spring maintenance season begins.

The 226,000 b/d PCK refinery in Schwedt is continuing to run at reduced rates after Germany banned Russian crude through the Druzhba pipeline on 1 January. Schwedt's utilisation is currently at 58-59pc, according to Brandenburg minister Dietmar Woidke, which is lower than expected. Planned partial maintenance from 10 April to 31 May will reduce utilisation to below 50pc, but rates are expected to increase once the maintenance is completed. The site hosts a 52,000 t/yr toluene and 130,000 t/yr MX unit, but aromatics supply has not seen a significant impact from the lower refinery rates with contractual volumes still being supplied without issue.

Production disruptions at an 80,000 t/yr toluene and 70,000t/yr MX unit in Slovakia that started earlier this month are likely to continue until at least mid-April, further limiting availability in the region and forcing some consumers to source material from other producers.

Cracker operations in Europe are stable at relatively low rates, mostly reduced to balance the weak demand. Bad weather in the Mediterranean region did disrupt operations over the past couple of weeks but that is now normalising. Modelled margins are close to breakeven, even with the falls in gas and power costs since December.

Demand from the gasoline pool held relatively steady, with nitration-grade toluene at a \$200-220/t premium to front-month gasoline swaps. The gasoline-naphtha spread has continued to hold below \$100/t in the second half of February but this has so far done little to significantly weigh on premi-



## EUROPE

ums for high octane components. Blending demand has been supported by the upcoming switch the higher priced summer-grade gasoline specifications at the end of the month ahead of the peak summer driving season.

Export interest in reformat has continued this quarter, with a 30,000t Spanish cargo loaded late last week to the US Atlantic coast. Transatlantic reformat exports increased in the fourth quarter of last year, with over 113,000t exported from the EU 15 in November and December, compared with close to nothing in the previous four months. Exports in recent months have led to a slight tightening of available prompt material in Europe, with 99 Ron material discussed at premiums to March gasoline in the low \$100s/t.

### Mixed xylenes

MX prices eased this week on upstream volatility.

Spot material was mostly at a \$200-220/t premium to March gasoline swaps, with interest underpinned by demand from gasoline blenders. The upcoming switch to summer-grade gasoline specifications at the end of March is lending some support, with April gasoline swaps pricing above March and starting to encourage some slight stockbuilding.

Distribution demand remains firm, with some slight increase in orders since the second half of January. But isomerisation demand remains lacklustre, with both OX and PX margins constrained and producers either running units at minimal rates or idled.

Production issues at a 70,000 t/yr Slovakian unit are likely to last until at least mid-April, tightening prompt supply ahead of the peak summer driving season.

Some European material is continuing to head transatlantic but in the form of internal transfers, as most traders are unwilling to look at the route given recent volatility and narrow spreads.

### Orthoxylene

The February OX contract price was confirmed at €1,360/t, a rollover from January. Discussions were difficult this month with producers and consumers struggling to find consensus with some failing to come to agreements and leaving the total number of settlements limited.

Producers were pushing for increases based on the gains in feedstock MX over the previous month and were reluctant to see margins squeezed further, while consumers looked for a decrease on lacklustre downstream demand, easing gas and

power costs and recent Asian imports. In the end a rollover was agreed as compromise.

### Phthalic anhydride

The February PA contract price was assessed at €1,655-1,675/t, a rollover from January, as feedstock costs held steady.

The rollover will provide some relief to producers who were concerned that any increase in feedstock costs would weigh further on downstream demand. But it also does little to spur confidence as PA producers had already been struggling to pass on relatively high OX costs further downstream and have been pushing for further decreases in an attempt to revive demand.

Downstream demand remains weak despite steady growth in the automotive market. The EU's new passenger car registrations in January rose by 11.3pc from a year earlier to 760,041 units, continuing the growth that began in August 2022. However, this mainly reflected an exceptionally low base comparison last year, when the lowest January volumes were reached, owing to the impact of severe supply chain bottlenecks. Spain and Italy saw the biggest increase of 51pc and 19pc, respectively, followed by France with almost 9pc.

### Paraxylene

PX prices held relatively steady this week on minimal direction from the Asian markets.

Domestic demand remains muted, with operating rates reduced across the continent. Some producers continue to sell feedstock MX to the gasoline pool, rather than produce incremental PX volumes because of weak-to-negative margins.

Following the deadly earthquakes in Turkey, Sasa Polyester shut its 280,000 t/yr DMT line as a precautionary measure on 22 February to carry out checks and potential maintenance. The shutdown is scheduled to last for a month. Sasa reported that no damage had occurred and there had been no interruption to production and shipments following the earthquakes.

### PTA

PTA operating rates remain reduced, but the end of planned downstream PET maintenance will allow for some ramp up in production in March.

There have been tentative signs of increased PET spot demand this quarter, providing some slight optimism to the European market, but this has yet to translate into changes in buying patterns.

## ASIA-PACIFIC

## Crude and naphtha

Crude prices ended the week steady on signs of tighter supply.

Russia is planning a 25pc cut to crude exports from its Baltic and Black Sea ports next month, according to market sources. Based on last year's average loadings of 2mn b/d, this would amount to a reduction of around 500,000 b/d. Sources attributed the export cut to unspecified "maintenance", although it also coincides with Russia's planned 500,000 b/d "voluntary" cut to overall crude production in March, announced by deputy prime minister Alexander Novak earlier this month. Dubai swaps rose to \$81.27/bl, up by \$0.08/bl compared with 20 February.

Asian naphtha margins surged past \$100/t this week on stronger demand in the region. Several petrochemical producers, including Maruzen, Mitsui Chem and YNCC, emerged to secure April delivery spot cargoes to run their baseload, because of fears of tight supplies in Asia resulting from a closed arbitrage. Naphtha prices ended the week at \$721.25/t, down by \$1/t compared with 20 February.

## Toluene

Toluene prices edged higher alongside tightening supplies in the market resulting from plant turnarounds and cracker run rate cuts. Firm buying interests also underpinned sentiment this week.

Buyers in the fob South Korea market emerged mid-week for a 2,000t second-half March loading cargo at \$900/t. The bid was raised to \$905/t but did not attract any takers. There were also bids in the fob South Korea market for a 3,000t

Freight rates					\$/t
	Size t	Low	High	Mid	±
<b>Toluene/MX</b>					
South Korea-China	2,000-3,000	44	49	47	nc
Southeast Asia-China	2,000-3,000	74	79	77	nc
Southeast Asia-India	2,000-3,000	85	95	90	nc
<b>PX</b>					
South Korea-China	5,000	37	42	40	nc
South Korea-China	10,000	30	35	33	nc
Southeast Asia-China	5,000	73	77	75	nc
Southeast Asia-China	10,000	63	67	65	nc
Mideast Gulf-China/Taiwan range	10,000	87	92	90	nc
Mideast Gulf-China/Taiwan range	15,000	83	89	86	nc
West coast India-China/Taiwan range	10,000	84	89	87	nc
West coast India-China/Taiwan range	15,000	80	85	83	nc

Asia physical market weekly prices				\$/t
	Timing	Low	High	±
<b>Toluene</b>				
S Korea fob spot		900.00	910.00	+20.00
China cfr spot		920.00	930.00	nc
E China domestic ex-tank Yn/t		7,180.00	7,400.00	+155.00
Southeast Asia cfr spot		950.00	980.00	+30.00
India cfr spot		1,020.00	1,040.00	+10.00
India domestic ex-tank Rs/kg		82.00	83.00	-2.00
<b>Mixed xylenes</b>				
Isomer S Korea fob spot	Mar	921.00	949.00	-15.50
Isomer S Korea fob spot	Apr	921.00	949.00	-15.50
Isomer S Korea fob marker			938.30	-19.20
Isomer Taiwan cfr spot	Mar	944.00	972.00	-17.00
Isomer Taiwan cfr spot	Apr	944.00	972.00	-17.00
Isomer Taiwan cfr marker			961.30	-21.60
Solvent S Korea fob spot		919.00	920.00	+54.50
Solvent China cfr spot		939.00	940.00	+54.50
<b>Paraxylene</b>				
S Korea fob spot	Mar	991.00	1,006.00	-3.50
S Korea fob spot	Apr	992.00	1,007.00	-3.00
S Korea fob marker			1,001.07	-4.46
Taiwan cfr spot	Mar	1,009.00	1,024.00	-3.50
Taiwan cfr spot	Apr	1,010.00	1,025.00	-3.00
Taiwan cfr marker			1,019.07	-4.46
China cfr spot	Mar	1,009.00	1,024.00	-3.50
China cfr spot	Apr	1,010.00	1,025.00	-3.00
China cfr marker			1,019.07	-4.46
Southeast Asia cfr spot	Mar	999.00	1,014.00	-3.50
Southeast Asia cfr spot	Apr	1,000.00	1,015.00	-3.00
Southeast Asia cfr marker			1,009.07	-4.46
Asia cfr contract price	Mar		870.00	nc
Asia Argus contract price	Mar		870.00	nc
<b>Orthoxylene</b>				
S Korea fob spot		940.00	970.00	+20.00
Southeast Asia cfr spot		970.00	1,000.00	+20.00
cfr China		970.00	1,000.00	+20.00
cfr India		990.00	1,030.00	+20.00
PA flakes cfr northeast Asia		1,000.00	1,050.00	nc
PA flakes cfr southeast Asia spot		1,000.00	1,050.00	nc
<b>Fibre intermediates</b>				
PTA fob northeast Asia		750.00	790.00	nc
PTA China domestic marker			5,596.50	+124.50
MEG fob S Korea spot		505.00	520.00	+7.50
MEG cfr China spot		515.00	530.00	+7.50
MEG contract price	Feb	840.00	890.00	+30.00

## ASIA-PACIFIC

toluene March loading cargo at \$900-905/t, but did not meet any offers. Limited offers were submitted for a cargo loading in the first half of April at \$893-896/t, but failed to attract any buyers.

There were no discussions in the cfr China market this week. Supplies remained tight in China alongside a rise in demand, especially in the gasoline sector, with ex-tank prices in east China rising by Yn155/t to Yn7,180-7,400/t, equivalent to \$905-932/t on an import parity basis. The cfr China prices were assessed stable in view of muted discussions.

There was some buying interest in the cfr southeast Asia market, where market participants were quoting bids in the mid-to-high \$900s/t cfr southeast Asia, but no firm offers were submitted. Demand in Indonesia is balanced, and may rise by the end of March because of the upcoming Eid al-Fitr holiday in end April.

Inventories rose in India, resulting in weaker sentiment this week. Ex-tank prices inched down to Rs82-83/kg by the end of the week, down by Rs2/kg. Demand was largely balanced but high inventories weighed on prices. Buying ideas in the cfr India market were quoted at \$140-145/t to fob South Korea assessments for March arrival cargoes. The cfr India prices were adjusted higher to reflect increases in the fob South Korea market to \$1,020-1,040/t.

### Mixed xylenes

Isomer-grade mixed xylene (MX) prices retreated during the week following dips in crude futures. But prices rose on 24 February on increased buying interests for April cargoes, and rebounded by \$12/t from 17 February to \$948/t.

MX inventories are expected to rise in March, as a couple of downstream PX units in Asia-Pacific are undergoing turn-arounds.

MX-PX margins widened to \$97/t on 23 February before falling back to \$70/t, meeting last Friday's closed.

Trades in the spot market declined to just two second-half March loading cargoes sold this week. A fob South Korea cargo loading in March was sold at \$944/t on 21 February. A second-half March loading cargo was sold at \$938/t fob South Korea on 22 February to GS Caltex, likely by Antimo. Discussions for March loading cargoes were subdued.

Bids for April cargoes were placed between \$910-\$948/t against offers at \$924-\$955/t throughout the week. There have been no trades yet for April cargoes as there is more focus on prompt month loading.

Inventories in east China rose by 1,500t to 79,800t this week, on the back of increased crude imports from Russia.

Domestic Chinese prompt ex-tank prices rose by Yn105/t from 20 February to Yn7,475/t on 24 February, or an import parity equivalent of \$940/t.

South Korea's GS Caltex is expected to shut one reformer unit in Yeosu for 45-50 days maintenance in March, which will lead to lower MX production.

Solvent-grade MX (SMX) prices rose on firm buying interest, despite losses in upstream MX.

Bids emerged in the fob South Korea market at \$880/t on 24 February for second-half March loading. Buyers later raised the bids to \$910/t, which met an offer at \$920/t. The bids continued to inch higher to \$919/t but sellers have since dissipated.

Toluene premium to cfr Japan naphtha

\$/t



cfr Taiwan paraxylene premium to MX

\$/t



## ASIA-PACIFIC

There were no discussions in the cfr China market. Prices were adjusted higher to \$939-940/t in accordance to gains in the fob South Korea market.

Some distributors in Indonesia were looking to purchase SMX cargoes ahead of the upcoming Eid al-Fitr holiday at the end of April but there have been no firm offers so far. Discussions are expected to take place for March arrival cargoes in the cfr Indonesia market by the end of next week.

### Orthoxylene

Asia-Pacific orthoxylene prices inched up during the week to 24 February as Chinese demand for April deliveries slowly crept back into the market.

Operating rates at downstream phthalic anhydride plants are expected to remain below 50pc in March as inventory levels are high, but inventories may be whittled down and operating rates raised during the second quarter.

Buying indications for April cfr Zhangjiagang deliveries were \$20/t higher than the previous week at \$970/t. These were met with selling ideas hovering around the \$1,020/t cfr mark.

Feedstock isomer-grade mixed xylenes rose by almost \$15/t to around \$950/t fob South Korea on 24 February.

### Paraxylene

There were more trades concluded as there are several turn-arounds scheduled for March to April, which has supported Asia-Pacific paraxylene (PX) prices this week. But downstream PTA demand has yet to recover, hence there has been no rise in PX prices despite the upcoming cuts in PX production.

Overall demand continues to lag expectations a month

after China reopened its economy, but market participants are optimistic that PTA demand may pick up soon.

There were three trades concluded this week solely for Asian-origin cargoes arriving in April. GS Caltex on 21 February bought an April Asian cargo at \$1,023/t cfr from PTT Trading. OQ Trading sold an Asian cargo arriving in April to SKGC Singapore at \$1,024/t cfr on 22 February. An April-arrival Asian cargo traded at \$1,020/t cfr from TotalEnergies to ExxonMobil.

The March/April intermonth backwardation held steady at \$1/t, on expectations of well-balanced supply and demand. The PX-naphtha spread fell early in the week but rebounded by \$18/t from 17 February to \$312/t, remaining at a profitable margin for PX production.

ExxonMobil's SAR no.1 PX unit in Singapore with 530,000 t/yr of capacity underwent a 14-day maintenance in early February, but is experiencing slight delays in its start-up, according to market participants. Japanese producer Eneos' No.3 PX unit in Mizushima with a production capacity of 370,000 t/yr is expected to restart in mid-March. China's CNOOC Ningbo Daxie's new plant in Zhejiang with a nameplate capacity of 1.6mn t/yr is likely to start up at the end of March, according to market sources.

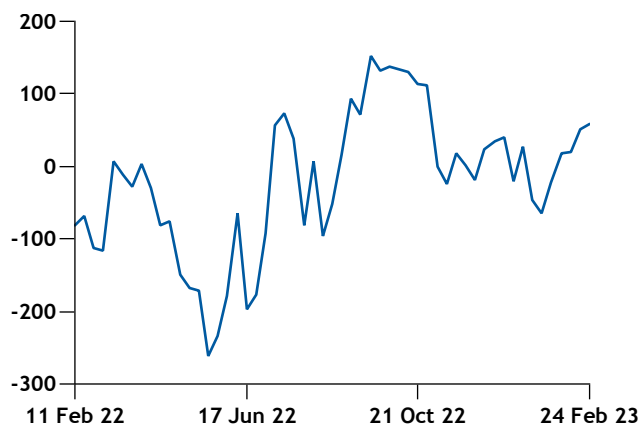
Indonesia's state-owned TPPI's 550,000 t/yr PX unit was shut on 22 February for a maintenance that is expected to last 30 days. South Korea producer GS Caltex plans to shut its 550,000 t/yr PX unit in Yeosu in early March and its 400,000 t/yr unit in mid-March for 45-50 days.

### PTA

Chinese domestic PTA traded higher during the assessment week following firmer PTA futures. The main TA2305 futures

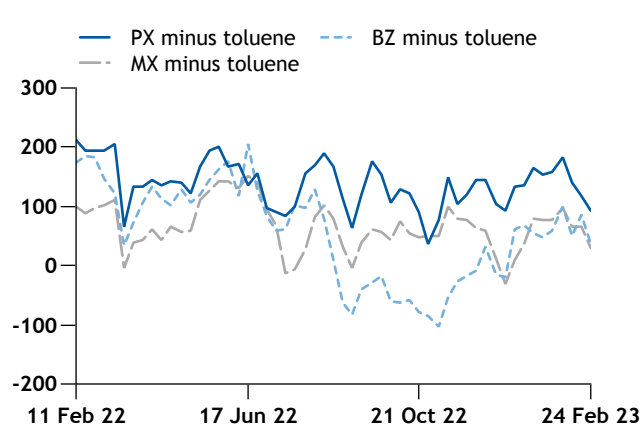
Toluene-gasoline blend value

\$/t



PX-toluene, BZ-toluene, MX-toluene spreads

\$/t



## ASIA-PACIFIC

contract closed at 5,638 yuan/t on 24 February, Yn200/t higher than on 17 February.

Trades in the physical market picked up during 20-22 February as both consumers and trading firms made purchases. Market participants expect demand to pick up in March and the consumption of PTA to subsequently increase. Prices for prompt shipments rose from Yn5,440/t to Yn5,700/t on a delivered basis, in line with higher PTA futures. Spot discounts of Yn5-10/t to the TA2305 futures contract shifted to Yn5-10/t premiums because some PTA plants plan to reduce output in March to cope with negative profits.

But negotiations slowed marginally in the second half of the week. Consumers adopted a wait-and-see approach, after purchasing some spot volumes during 21-22 February. More offers were available in the physical market on 23 February. Deal prices retreated to Yn5,600/t on a delivered basis, with a narrower premium of Yn5/t.

A rebound in crude and PTA futures lifted deal prices for prompt shipments to Yn5,640/t on 24 February, but spot pre-

miums fell to parity to the TA2305 futures contract.

Shandong Weilian shut its 2.5mn t/yr PTA plant on 23 February to undertake a 4-5 day turnaround. Sinopec Yizheng Chemical Fiber plans to carry out a week-long maintenance at its 550,000 t/yr PTA line by the end of February. Hengli Petrochemical is considering undertaking turnarounds at two PTA lines in March to reduce losses. But Xinjiang Zhongtai plans to restart its 1.2mn t/yr PTA plant on 28 February, and Yisheng Petrochemical aims to resume production at its 2.5mn t/yr No.1 PTA line in Dalian in early March.

The PTA price spread to feedstock costs rose to Yn300/t this week because of steady feedstock PX as well as PTA maintenances. But it was still below the breakeven point of Yn500/t.

The fob northeast Asia market remained quiet. Chinese and Taiwanese producers offered March shipments at \$780-790/t fob. But buyers remained on the sidelines because of weak demand. Notional bids were placed at \$750/t. No deals were done.

## PET FIBER

### Americas

#### PET fiber

Prices are in the range of 84.5¢/lb to 95.0¢/lb.

PET fiber demand is expected to pick up in coming week, supporting the current values. Production units are now operating at increased rates despite declining margins. The PET fiber margins are expected to decline this year amid lower freight rates. Lower energy prices will push freight rates even lower and support increased imports.

PET fiber prices held between 84.5¢/lb to 95.0¢/lb despite lackluster PET fiber sales. The PET fiber prices are expected to remain stable amid declining feedstock prices with the expectation of improved demand outlook.

PET fiber production units are expected to trend up with the expectation of improved global demand. The current plants are running at higher operating rates, inching toward 80pc capacity.

#### Cotton

Prices range 78.16¢/lb to 82.66¢/lb

The cotton price decreased 3.09¢/lb and is in the range of 78.16¢/lb to 82.66¢/lb from the week of 10 February. The A

index continued to waver around 100¢/lb amid stable energy prices.

China Cotton Index (CC 3128B), in international terms flat at 107¢/lb. Indian spot prices (Shankar-6 quality) decreased to 94¢/lb. Pakistan spot price is at 97¢/lb. The prices in Asia continue to be in the range of 94¢/lb to 107¢/lb.

USDA global production forecast for 2022/2023 decreased by 0.332mn bales to 115.4mn bales. India production is forecast to drop 1.0mn bales to 26.5mn bales, Brazil production is forecast to increase 0.3mn bales to 13.3mn bales, and US production is forecast to increase 0.438mn bales to 14.7mn bales. The global trade estimate fell 0.645mn bales to 41.6mn bales.

For mill use, USDA predicted a 0.846mn bale decrease to 110.9mn bales in the crop year 2022/2023. India mills use is expected to decrease 0.5mn bales to 22.5mn bales, Indonesia mill use is expected to decline 0.25mn bales to 2.2mn bales and Vietnam mill use is expected to decrease 0.1mn bales to 6.4mn bales.

#### MEG

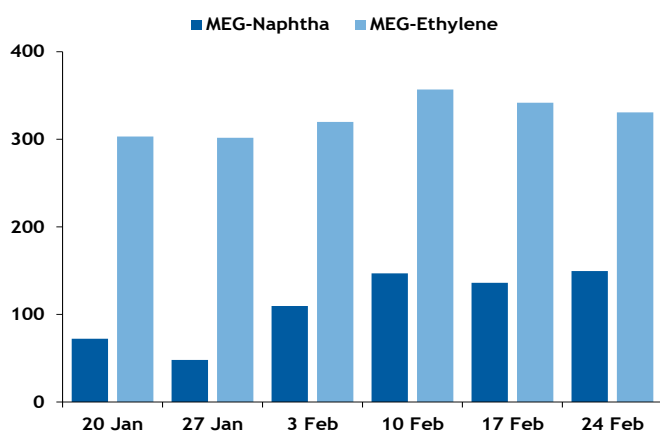
Prices are in the range of 37-38¢/lb.

MEG prices are firm in the range of 37-38¢/lb amid tight

## PET FIBER

### MEG, naphtha, ethylene price spreads

\$/t



supply in the market. The MEG operating plants are running at lower operating rates in the US on ethylene supply tightness. Global major MEG producers are in maintenance for March. Higher ethylene and naphtha prices are supporting the current price level.

The MEG-naphtha spread increased \$13/t to \$150/t from last week amid supply tightness. The MEG-ethylene spread declined \$11/t to \$331/t amid higher feedstock prices.

### Europe

#### PET fiber

PET fiber prices eased on weaker feedstock costs. Falling gas and power prices in Europe have helped to provide some relief to producers, but operating costs remain elevated compared to historical standards and is leaving European production uncompetitive.

Weak European margins have led to Indorama taking a \$120mn impairment of certain fiber assets in Europe in the fourth quarter.

#### MEG

Lower gas and energy prices since December are giving some relief to European MEG producers although the demand remains muted, both into the PET and antifreeze segments. The prospect of an EU anti-dumping investigation against Chinese PET could allow domestic producers to increase operating rates later this year, increasing demand for MEG, but it remains uncertain if any duties will be implemented. Europe is a net importer of MEG and operating rates have been supported by lower imports from the US this quarter.

The feedstock ethylene March contract price will be

### PET Fiber market prices

	Low	High	Mid	±
<b>Americas \$/lb</b>				
Staple 0.9-1.5 den staple	84.50	91.50	88.00	nc
Filament 150 POY feeder	91.00	95.00	93.00	nc
Cotton US spot	80.90	85.40	83.15	-0.50
<b>Europe €/t</b>				
Staple 0.9-1.5 den staple	1,350.00	1,385.00	1,367.50	-30.00
Filament 150 POY feeder	1,385.00	1,420.00	1,402.50	-30.00
<b>Asia-Pacific</b>				
Staple 1.4D/38mm semi dull Yn/t	7,060.00	7,190.00	7,125.00	-77.50
Staple 1.4D/38mm semi dull \$/t	1,022.09	1,040.91	1,031.50	-30.72
Filament 150D/48F POY Yn/t	7,330.00	7,450.00	7,390.00	-185.00
Filament 150D/48F POY \$/t	1,061.18	1,078.55	1,069.87	-47.29

settled next week. Naphtha prices are almost 30/t higher so far in February from a month earlier, but poor demand and weak cracker margins are likely to limit the scope of the March contract negotiations.

### Asia-Pacific

#### PET fiber

PET fiber sales picked up in the Chinese domestic market as consumers returned and made purchases.

Staple 1.4D/38mm traded higher from 7,060 yuan/t on 20 February to Yn7,190/t ex-warehouse on 24 February, while filament POY 150D/48F rose by Yn120/t from Yn7,330/t to Yn7,450/t ex-warehouse. Firmer PTA and MEG futures lifted PET fiber prices during the week.

Textile and dyeing mills ramped up operating rates, which boosted demand for PET fiber. The overall sales to output ratio in the PET fiber sector rose to 80pc this week, nearly double the ratio in early February.

Polymerization utilization rose to 80pc early this week, because PET fiber producers increased filament output. They expect demand to pick up from late February and return to normal levels in March. Market participants also expect that polymerization utilization will reach 83-85pc by the end of February or early March.

But concerns about overseas demand increased recently. Cloth and textile exporters stated that overseas demand was still limited despite freight rates having fallen sharply for a couple of months. Lackluster exports are exerting pressure on PET fiber demand, as China is world's largest textile exporter.



## PET FIBER

## MEG

MEG prices for March shipments rose from \$515/t to \$530/t on a cfr China basis during 20-24 February following firmer MEG futures as well as higher feedstock ethylene prices. But trades were limited as only a few trading firms finalised deals because of uncertainty over March demand.

Consumers remained on the sidelines as there are sufficient supplies from domestic MEG producers. They are trying to reduce their product stocks as they observed that the sales-to-output ratio for the first half of February remained below 50pc.

There were more negotiations in the domestic Chinese market on firmer MEG futures. Some trading firms made purchases for late February or March shipments as they expect demand to recover in March. Deal prices rose from Yn4,150/t to Yn4,260/t during 20-24 February alongside higher MEG futures. Some market participants expect the upcoming peak demand season in March-May to lift MEG prices. Discounts to the EG2305 futures contract narrowed from Yn80/t to Yn70/t in the first half of the week, but widened to Yn80-85/t during 22-24 February.

Inventories at east China's main ports increased by 14,000t to 1.06mnt this week.

## Announcement

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A spate of new capacities are emerging. Sinopec Hainan brought on line a new 800,000 t/yr MEG plant last week. Shenghong Petrochemical plans to start up its second MEG plant with a 900,000 t/yr capacity by the end of February. Sanjiang Chemical is aiming to commission its 1mn t/yr MEG unit in March.

Taiwan Nanya plans to further reduce MEG output because of negative margins, by shutting down its 360,000 t/yr No.3 and 360,000 t/yr No.4 MEG lines in April to undergo turn-arounds. But its 360,000 t/yr No.1 line will be restarted. Its 720,000 t/yr No.4 line has been kept idle for a year without any plans for an immediate restart. China's syngas-based MEG operating rates declined marginally to around 50pc, about 5 percentage points lower than in mid-January.



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