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Argus Benzene and Derivatives

Formerly Argus DeWitt Benzene and Derivatives

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HIGHLIGHTS

Americas

- Benzene fell alongside energy futures and closes at a premium to Europe BZ
- Styrene remains firm in a tight market. Liquidity is thin.

Europe

- Benzene fell to a two-month low on weak demand.
- Styrene tightened further following production problems in France.

Asia-Pacific

- Benzene rose with crude. Benzene-naphtha narrowed with weaker styrene, gasoline cracks, and arbitrage opportunities.
- Styrene rose with crude, benzene. Market eyes next deep-sea exports.

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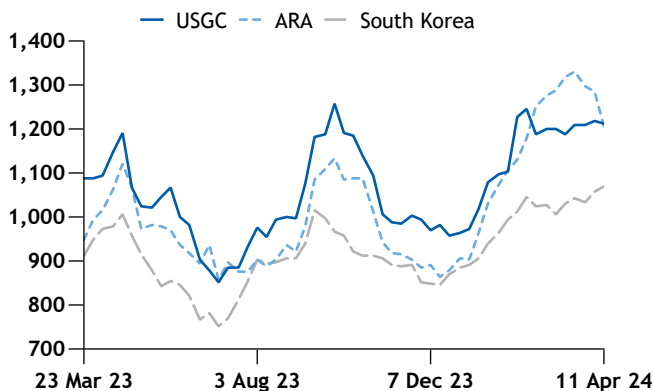
MARKET SNAPSHOTS

Global benzene prices					\$/t
	Timing	Low	High	Mid	±
Americas					
fob USGC contract	Mar	1,206.18	1,206.18	1,206.18	nc
USGC spot	Prompt	1,197.20	1,227.13	1,212.17	-5.99
Europe					
cif NWE contract	Apr	1,372.00	1,372.00	1,372.00	nc
cif ARA spot weekly average	Prompt			1,205.10	-79.23
Asia-Pacific					
cfr South Korea contract	Apr	1,029.85	1,070.00	1,049.93	
cfr Taiwan contract	Apr	1,047.85	1,070.00	1,058.93	
cfr Asean contract	Apr	1,023.85	1,070.00	1,046.93	
fob South Korea	Marker			1,070.92	+13.67
cfr China	Prompt	1,099.00	1,120.00	1,109.50	+14.00

Benzene breakeven price from toluene conversion				\$/t
Process	Asia-Pacific	Western Europe	US Gulf coast	
STDP	966.49	1,155.92	1,085.23	
TDP	910.77	1,211.11	1,141.15	
HDA	1,182.50	1,446.88	1,431.20	

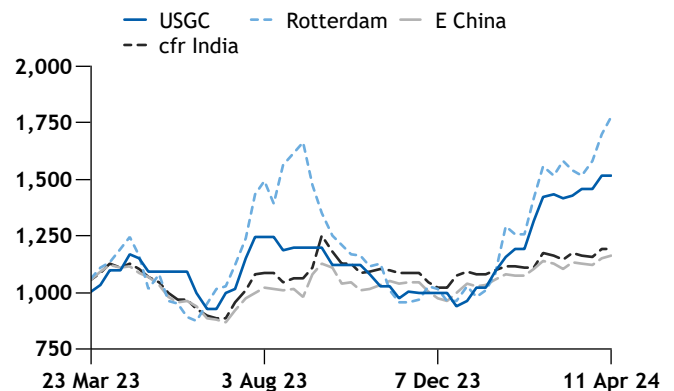
Global benzene prices

\$/t



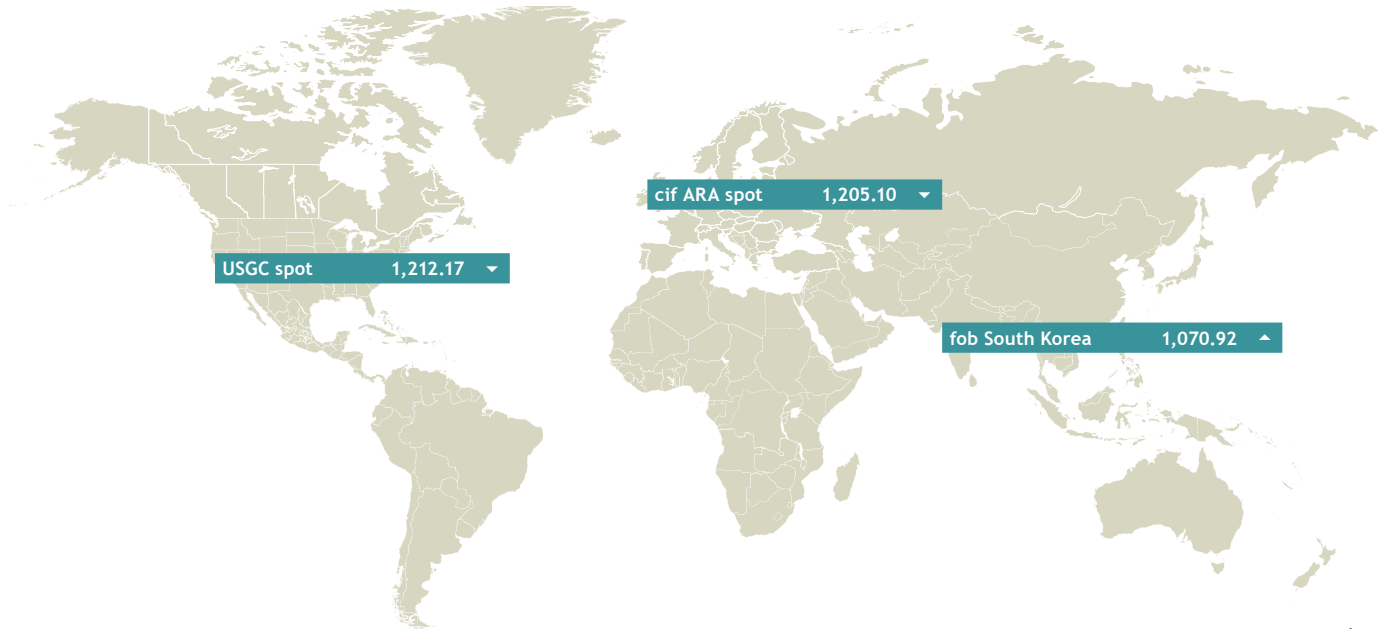
Global styrene prices

\$/t



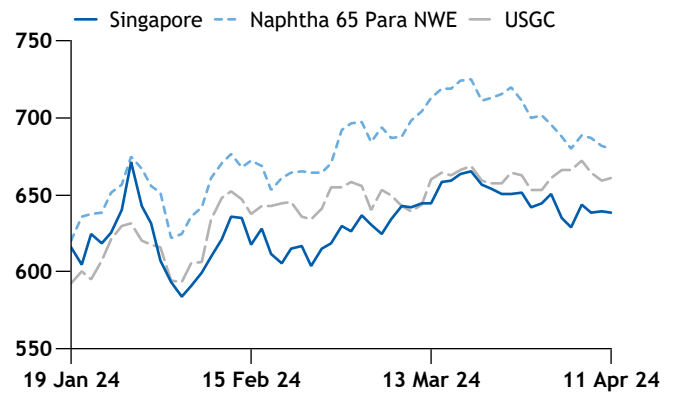
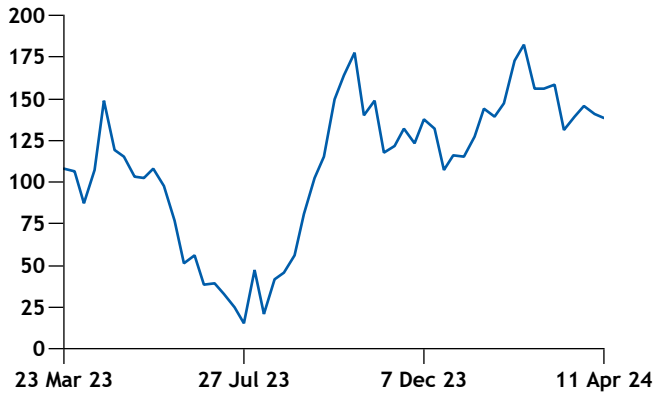
GLOBAL PRICES

\$/t



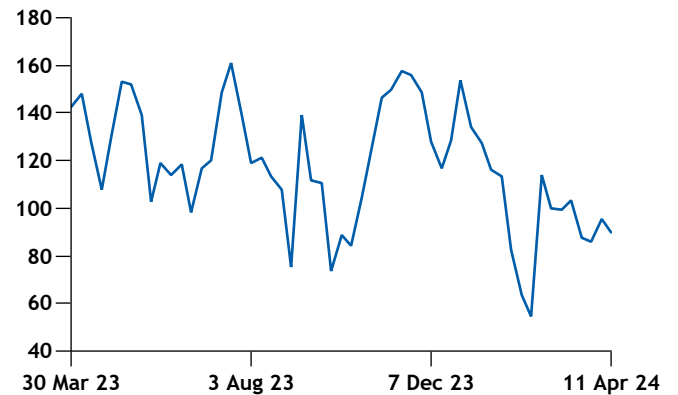
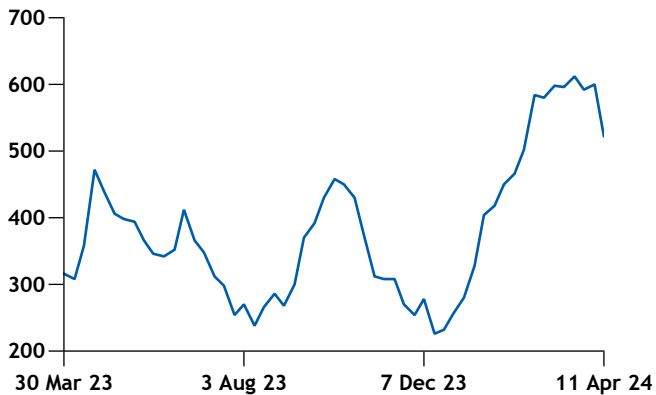
USGC benzene premium to USGC gasoline €/USG

Global naphtha prices \$/t



ARA benzene premium to NWE naphtha \$/t

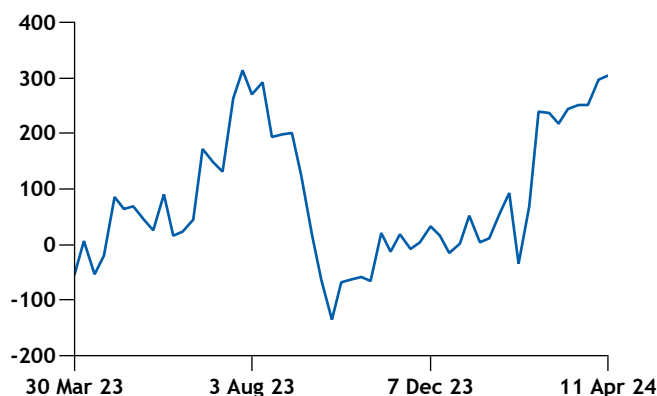
East China styrene premium to benzene \$/t



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USGC styrene premium to benzene

\$/t



Benzene

Prompt spot US benzene (BZ) saw higher liquidity from the week prior and was assessed in the 400-410¢/USG range based on deals done throughout the week.

BZ volumes totaled 205,000bl done this week for April delivery to inform the assessment in line with the methodology.

April BZ ddp Houston-Texas City (HTC) closed at 400.5¢/USG on Thursday, May BZ ddp HTC closed at 399¢/USG and June BZ ddp HTC closed at 399¢/USG. April BZ ddp Lower Mississippi River (LMR) closed at 403.5¢/USG - a 3¢/USG premium to April BZ ddp HTC and May BZ ddp LMR closed at 402¢/USG - a 3¢/USG premium to May BZ ddp HTC.

US crude production remained unchanged the week ending 5 April at 13.1mn b/d and crude inventories (excluding SPR) increased by 5.9mn bl to 457.3mn bl. Crude imports declined slightly to 6.4mn b/d and exports declined by 1.3mn b/d to 2.7mn b/d. On refining activity, total crude runs remained at 16.2mn b/d and refinery utilization rates inched downward to 88.3pc.

On gasoline, inventories are up by 0.7mn bl to 228.5mn bl. Implied demand slid to 8.6mn b/d, bringing estimated inventory cover to 26.5 days of current use. Gasoline refinery yields declined by 1.7pc to 51.3pc while middle distillate yields netted a 0.6pc increase to 43.2pc.

On middle distillates, diesel inventories increased by 1.7mn bl to 117.7mn bl, motor gasoline blending component inventories increased by 0.2mn bl to 214.8mn bl and fuel oil inventories declined by 0.3mn bl to 29.4mn bl.

Prices across the energy complex have generally declined

Americas prices					
	Timing	Low	High	Mid	±
Benzene ¢/USG					
fob USGC contract	Mar	403.00	403.00	403.00	nc
USGC spot	Prompt*	400.00	410.00	405.00	-2.00
Styrene ¢/lb					
fob USGC contract	Feb	86.25	87.51	86.88	nc
fob USGC spot	Prompt*	68.72	68.72	68.72	nc
fob USGC VWA	Mar			61.13	nc
USGC large buyer index	Mar			65.21	nc
Ethylbenzene ¢/USG					
ddp USGC	Dec	369.86	382.16	376.01	+8.01
USGC premium to Rbob	Dec	+95.00	+104.00	99.50	+11.00
Cumene formula ¢/lb					
fob USGC contract	Mar	39.13	39.13	39.13	nc
Phenol ¢/lb					
fob USGC contract	Mar	63.94	67.45	65.70	nc
Cyclohexane ¢/USG					
fob USGC contract	Feb	342.30	342.30	342.30	nc
Marker with NG escalator	Feb	348.91	348.91	348.91	nc

*Prompt refers to current month, but if the publication date is on or after the 15th of a given month, then the spot posting will include current month and next month trades

Benchmark margins		¢/USG	
		Margin	±
BTX US reformat extraction vs floor contract		10.50	-17.42
BTX US reformat extraction vs floor spot		10.78	-17.71
BT US reformat extraction vs floor contract		-39.73	-15.82
BT US reformat extraction vs floor spot		-39.23	-16.32

US polystyrene markets		¢/lb		
	Timing	Contract marker	Low / High ±	Argus Δ
GPPS	Mar	118.5	6.0 / 6.0	+6.0
HIPS	Mar	129.5	6.0 / 6.0	+6.0

the week ending 12 April 2024. Nymex WTI crude futures closed at \$85.02/bl on Thursday - down by \$1.57/bl from last week. Front month RBOB gasoline futures declined by 2.01¢/USG to close at 277.41¢/USG on Thursday. Reformate strengthened by 6.99¢/USG over the week and closed at 357.41¢/USG on Thursday and the reformate spread over conventional gasoline widened to 92.87¢/USG.

On BZ supply, operating rates remained near 90pc the week ending 5 April, according to EIA data released Wednesday. Several derivative cumene and styrene units are under maintenance with production expected to come back online in

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May. Market participants are drawing bearish and bullish sentiments from the state of the market with the impending restart of styrene production units in the US and in Europe.

Margins for selective-toluene disproportionation (STDP) and toluene-paraxylene (TPX) units remain negative and operating rates remain reduced. BZ closed at 25.5¢/USG premium over nitration-grade toluene (NGT) on Thursday.

On BZ consumption, the April-loading ethylbenzene (EB) assessment strengthened by 8¢/USG to 376¢/USG on stronger bids and offers based on premiums to Rbob gasoline futures. Buy ideas were around 95¢/USG over May RBOB futures and sell ideas were around 104¢/USG over May Rbob futures.

The arbitrage between the US and Europe remained closed on paper this week with freight costs at an estimated \$100-120/t. The arbitrage from South Korea to the US remained open on paper as June US BZ ddp HTC closed Thursday at a \$108/t premium to prompt South Korea BZ - freight costs for midrange vessels are estimated \$75-100/t.

Styrene

US prompt styrene monomer (SM) rolled this week, remaining assessed at \$1,515/t based on the last deal done - in line with the methodology.

Ethylene at the Enterprise Products Partners (EPC) cavern at Mont Belvieu, Texas, last traded at 19.5¢/lb yesterday. Texas spot prices remained largely unchanged, even as Formosa's 862,000 t/yr mixed-feed cracker in Point Comfort, Texas, restarted after its planned turnaround ended. The price of ethylene at the Choctaw, Louisiana, hub has risen by 8pc in month-to-date, creating a 1.5-2¢/lb premium to the Mont Belvieu hub this past week— its highest premium since May 2022. April Choctaw ethylene also traded yesterday at 21¢/lb totaling. The deal at 21¢/lb is the highest recorded Choctaw trade since mid-October 2023. Driving prices to six-month highs is a delay in the completion of the turnaround at Nova Chemical's 880,000 t/yr mixed-feed merchant cracker in Geismar, Louisiana. As Nova's cracker is one of only two merchant ethylene crackers in the US, an unexpected delay to production has an outsized impact on spot prices. Nova's cracker began its planned turnaround in-Mid January and was expected to return to operations by the end of March. Per market sources, that restart has not yet happened.

Margins at US crackers remain largely the same. Ethane cracking margins remain between 10-11¢/lb, per Argus's gener-

ic model. Argus believes that only a major pickup in derivative demand beyond polyethylene (PE) would likely help margins breakout from this range, meaning more demand for polyvinyl chloride (PVC) and ethylene oxide/ethylene glycol (EO/EG). Propane and butane cracking margins remain negative but did improve slightly. Propane margins rose from -4.5¢/lb to -2.5¢/lb on declines in crude, while butane margins improved from their lowest levels since December of -7.5¢/lb to -1¢/lb after a terminal operator who got caught short, stopped buying.

In styrene production, one SM unit on the US Gulf coast has a line still down. Participants further corroborated that the line will remain offline until the line undergoes scheduled maintenance in April through mid-May. The EB unit is expected to be down for two weeks or so of the turnaround.

Another EBSM operator restarted an idled ethylbenzene unit just ahead of schedule on 26 March for supply of EB to octane blenders. A third styrene unit that remained started its turnaround in January has ramped up operating rates at end March and sold some volume. A fourth SM unit is now down for turnaround and is expected to stay offline until end-May, market sources corroborated. Confirmation from the company remained unavailable. A smaller fifth styrene unit initially due to have its scheduled maintenance in third-quarter 2024 may push its maintenance to early 2025.

On arbitrage trade, the arbitrage from the US into Europe is open on paper with Europe SM at a heavy premium to US SM. Traders remain cautious of playing the arbitrage into Europe with little information on when SM lines will come back online. The arbitrage from China to the US is open on paper.

Polystyrene

Argus finalized US polystyrene (PS) contract prices (CP) up 6¢/lb for March based on surveyed market settlements during the week.

Following three Americas producers nominating 7¢/lb increases for March and a fourth Americas producer nominating a 5¢/lb increase, buyers were heard compromising in contract negotiations with producers in light of a lower feedstock benzene contract price settlement for April.

The March benzene (BZ) CP rose by 46¢/USG to settle at 410¢/USG, followed by a 7¢/USG decline to 403¢/USG for the April BZ CP. Typically, PS contracts move up or down 1¢/lb following a corresponding 10¢/USG movement in the BZ contract price.

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Buyers initially pushed for lower contracts after most Americas PS producers nominated at a higher 7¢/lb, 2¢/lb higher than expectations. As PS CP negotiations continued, early ideas for April contracts leaned toward an increase. However, following the weaker April BZ CP, buyers appeared content to accept a slightly higher 6¢/lb increase in March contracts while producers pull back in favor of a flat April PS contract.

This informed *Argus'* final PS contracts assessment for March, with indications for April flat.

Revised and finalized US sales data for PS totaled 277.55mn lb for February 2024, up from 266mn lb the same time last year and up 4.76pc from the month prior, according to the ACC's Plastics Industry Producers' Statistics Group as compiled by Vault Consulting.

Of the total sales, 168.3mn lb were general-purpose polystyrene (GPPS) sales and 109.3mn lb were high-impact polystyrene (HIPS) in February 2024.

Production volume was revised to 270.1mn lb for February 2024, down from 287.5mn lb of production in February 2023 but up 5.2pc from last month. Capacity utilization stood at 63.3pc in February 2024, up 7pc from the month prior but down 7.5pc from a year ago.

Since sales outpaced production, inventories fell by 7.4mn lb, or 3,376t. Days of supply fell to 29.5 days from 33.9 days.

Domestic demand for PS totaled 271.3mn for February 2024. Consumer and Institutional use of PS was 24.7mn, 7pc higher than February 2023. Food packaging and food service use of PS, non-foam and foam, made up 175mn of the total and rose 8.6pc from February 2023. Electrical/electronic use

of PS fell 1.4pc to 28.3mn, down from 28.7mn. Building and construction use of PS totaled 8.1mn, up 62.6pc from 5mn in February 2023.

In trade data, PS imports totaled just 4,570t in February 2024, according to data from the Global Trade Tracker (GTT). That is a 26pc decrease from the 6,146t imported in January and down 40pc from February 2023. This stands as the lowest import level since March 2023. Mexico delivered the most PS at 1,667t, with the remaining countries supplying less than 900t each. This comes as freight rates have increased and so domestic US production increased in lieu of greater imports.

Regarding consumer sentiment, the US consumer price index (CPI) accelerated to a 3.5pc annual pace in March, a sign the Federal Reserve is likely to hold its target lending rate at a 23-year high for longer in order to slow inflation to its long-range goal. The CPI rose from a 3.2pc rate in February and was the highest since it reached 3.7pc in September, the Bureau of Labor Statistics reported.

Many PS participants just a month prior were optimistic that the Fed might begin reducing lending rates in June, which would incentivize demand for PS consumable products in durables - such as automobiles and houses.

The CPI report reduced the probability that the US Federal Reserve will begin cutting its target rate at its June meeting to less than 20pc, futures markets showed on Wednesday, down from a greater than 57pc probability on Tuesday. The Fed last week signaled it was in no hurry to begin cutting borrowing costs amid stronger than expected economic data, even as it also suggested most members did expect cuts to begin later this year.

EUROPE

Benzene

Spot benzene prices fell to a two-month low as demand weakened following styrene production disruptions. A firm upstream energy market provided a base for benzene in Europe, limiting the downside in the spot market.

Overall trading was thin, with sellers dominating the market. The *Argus* daily assessment for the front month (April) dropped steadily, falling below \$1,200/t for the first time since February, ending \$1,194/t, or almost 13pc below contract values, on 11 April. The backwardation in April-May markets

narrowed to \$10-15/t early on, from \$25-35/t in the previous week, before flipping to a modest contango of \$5-10/t later in the week. No deals were reported this week. Deals have been scarce since the April benzene contract price was settled at end-March.

Prompt benzene supply outpaced demand, which further weakened after operations at a petrochemicals complex in France, home to a 740,000 t/yr ethylbenzene unit, was disrupted late last week. The site has a benzene capacity of 200,000 t/yr from pygas and 160,000 t/yr from a reformer,

EUROPE

with the balance of the EB's feedstock benzene requirements secured externally. This came about a week after the unplanned shutdown of a propylene oxide-styrene monomer (POSM) unit in the Netherlands.

The prompt market balance for benzene looked under control, despite the unexpected shutdown of two large styrene production units. Feedstock pygas supply remains limited. Overall cracker operating rates improved in the first quarter, but are still below capacity. Cracker margins are being squeezed by high feedstock costs, while ethylene demand - despite rising in the first quarter - remains fragile. In Germany, refinery constraints are causing naphtha supply problems for crackers in the Cologne area. LPG, including butane and propane, remains the preferred choice for crackers with feedstock flexibility, further curtailing pygas supply. Extraction margins eased, but remain solid overall, with the benzene-naphtha spread averaging \$551/t in April against almost \$600/t in March. Gasoline blending demand is stable and is not competing with benzene for pygas supply. The spring refinery maintenance season also curtailed benzene output from reformers. ExxonMobil's 191,000 b/d Rotterdam refinery is under maintenance and the 236,000 b/d Port Jerome refinery in France is down for repairs following a fire. Poland's Orlen and Switzerland-based Varo Energy started maintenance on smaller refineries in the region in recent weeks. Argus estimates that well over 1mn b/d of crude distillation capacity will be offline at the peak of Europe's maintenance season towards the end of April. Elsewhere, Trafigura said a consortium it has formed with energy infrastructure company Entara, called Rhone Energies, is in discussions to buy ExxonMobil's 133,000 b/d Fos

Europe prices				
	Timing	\$/t	€/t	Volume t
Benzene				
cif NWE contract	Apr	1,372	1,268	
cif ARA spot weekly average	Prompt	1,205.10	1,125.20	
Styrene				
fob ARA contract	Mar	1,904	1,778	
fca ARA spot	Prompt	1,681-1,735	1,570-1,620	
fob ARA spot	Prompt	1,750-1,800	1,634-1,681	
Argus fob ARA VWA	Mar	1,515.00	1,399.10	9,000
Argus fob ARA VWA	Feb	1,223.85	1,127.90	13,000
Phenol				
delivered ARA contract	Apr	1,851	1,728	
Cyclohexane				
fob ARA contract	Apr	1,567	1,463	

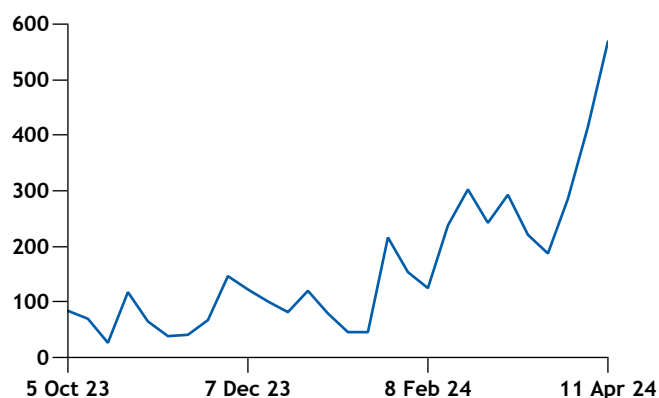
Supplementary benzene transaction data (cif ARA)					
	Timing	Volume weighted average \$/t	Min \$/t	Max \$/t	Total volume t
Week 15	Prompt	na	na	na	0.00
Month to date	Apr	1,341.25	1,290.00	1,375.00	4,000.00
Previous month	Mar	1,278.33	1,270.00	1,295.00	3,000.00

Western Europe polystyrene markets				€/t
	Timing	Contract marker	Low / High ±	Argus Δ
GPPS	Mar	1,895.0	190.0 / 220.0	+205.0
HIPS	Mar	1,995.0	190.0 / 220.0	+205.0

refinery in France, two terminals and associated inventories. This would mark ExxonMobil's exit from the Mediterranean downstream, after the sale of the 198,000 b/d Augusta and 126,500 b/d Trecate refineries in 2018 and 2023, respectively.

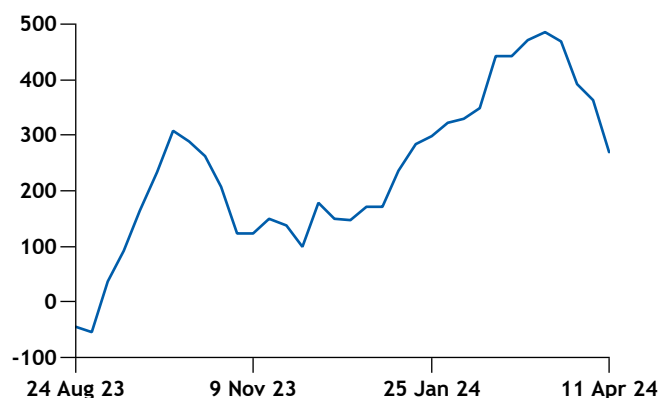
NWE styrene premium to benzene

\$/t



cif ARA benzene premium to Eurobob

\$/t



EUROPE

ExxonMobil continues to operate crude distillation in north-west Europe, including at the 236,000 b/d Port Jerome unit in France.

European benzene prices lagged the US for the first time since February, but export economics are still unworkable. Benzene is widely available in Europe, but bulking up export volumes of 5,000-10,000t looks difficult at this stage.

Upstream, North Sea Dated crude hovered above \$90/bl this week, reaching a six-month peak of \$93/bl before retreating to \$91/bl on 11 April on concerns about a wider conflict in the Middle East. Naphtha tracked crude, picking up to above \$690/t early in the week, before retreating to \$684/t on 11 April. Gains in naphtha were tempered by weak domestic demand and limited export opportunities.

ExxonMobil has announced plans to permanently halt chemical production at its Notre Dame de Gravenchon (NDG) site in Port-Jerome-sur-Seine in France. It said the site has reported losses of more than €500mn (\$537mn) since 2018. The plan, presented on 11 April to staff and the works council, involves the closure of the cracker and related derivatives units and logistics facilities. It is subject to government approvals and the closure, once approved, is expected in 2024. The site has a capacity of 400,000 t/yr for ethylene and 290,00 t/yr for propylene. Exxon said the configuration of the cracker, its small size compared to newer units, high operating and energy costs in Europe have made the site uncompetitive. The Port Jerome refinery is unaffected and will continue to operate. The NDG cracker supplies feedstock to Exxon's benzene extraction unit in Rotterdam, although the company could secure alternative sources.

Sabir, meanwhile, is to close one of two crackers at its Geleen site in the Netherlands later this week. The cracker, called Olefins 3, has an ethylene capacity of 550,000 t/yr and propylene capacity of 260,000 t/yr. Five other units will be shut during a three-month turnaround, which will last until mid-July. Sabir did not provide details. The larger cracker, Olefins 4, which has a capacity of 675,000 t/yr of ethylene and 485,000 t/yr of propylene, continues to operate. Geleen has a benzene capacity of 350,000 t/yr.

Styrene

Spot styrene prices jumped this week following production disruptions in France, further tightening prompt supply. Demand

waned in a heavily backwarddated market, capping gains in styrene prices in Europe.

The Argus daily front-month assessment breached \$1,700/t for the first time since July 2022, peaking at \$1,825/t before settling at \$1,800/t on 11 April. April cargoes changed hands at \$1,750-1,800/t early in the week. The April-May spread was generally showing a heavy backwardation of \$100-200/t. June offers were showing steep discounts of \$200-300/t to April. Buyers retreated, with discussions becoming broadly notional as the week progressed.

A cracker outage in Gonfreville, France, has disrupted feedstock supply to a 680,000 t/yr styrene unit at the site since late last week. A phased restart is expected to begin in the coming days. The Maasvlakte POSM unit, which has a styrene capacity of 640,000 t/yr, remains offline, with no clear restart timetable. The Tarragona POSM unit in Spain, which has a styrene capacity of 450,000 t/yr, is running well after returning from a two-month maintenance spell in March. Other ethylbenzene-styrene and POSM/SMPO units that are operating could be ramping up, albeit cautiously and only on a short-term basis, to take advantage of the firm styrene and propylene oxide markets. Styrene production margins are robust, with styrene's premiums to benzene and naphtha well above \$500/t and \$1,000/t, respectively, this week, bringing the average to \$492/t and \$1,043/t in April. But high feedstock styrene costs has stifled the demand growth that emerged in February and March. Order offtake has generally slowed in April, with most consumers down the chain adequately covered after stocking up in the first quarter. Others opted to delay their purchases and wait for prices to fall amid a heavily backwarddated styrene market. Demand for packaging, including food and white goods, has been stable. A weak construction industry continued to weigh on styrene-based polymer demand, particularly for EPS, with the summer rebound impaired by high interest rates in Europe.

The arbitrage from the US and Asia is wide open on the front month, but traders are cautious about exporting to a heavily backwarddated European market in the second quarter. Limited volumes of US-origin styrene are heard to be arriving in May, mainly in the second half of the month, but most has been contracted. High freight costs and the extended voyage time around the Cape of Good Hope have impeded flows of styrene from Asia.

EUROPE

Polystyrene

Negotiations for the April polystyrene contracts are progressing this week, with another round of increases expected to track the rise in feedstock styrene costs.

Most producers are aiming for a rise of €55-60/t for both general purpose polystyrene (GPPS) and high-impact polystyrene (HIPS), about €10-15/t above the increase in styrene contract price (CP) for April. Consumers - still reeling from the steep price increases since February - are resisting producers' price hike targets for April, with some hoping to keep the increase in line with the feedstock cost rise. Market participants noted lower demand in April and stated that demand appears thin going forwards, with a seasonal uptick in the packaging sector yet to be felt in the market.

Styrene production outages in the Netherlands and France could again boost contract prices in May, according to some market sources, but they said if demand continues to be weak the impact could be muted.

Cyclohexane

The construction industry in Europe, one of the key markets for cyclohexane, remains in the doldrums in March, weighing on confidence in the seasonal summer rebound. The HCOB construction PMI in the eurozone remains in contraction in the

first quarter, falling to 42.4 in March from 42.9 in February, with the latest data showing a significant reduction in output last month. The contraction in construction activities was led by Germany and France. High interest rates have largely underpinned the downturn in the construction market since 2022. Inflation is starting to ease in the euro area, reaching 2.4pc in March - the lowest since December - down from 2.6pc in February, flash Eurostat estimates show, buoying confidence that the European Central Bank will begin cutting record high interest rates, possibly from June.

Phenol

The phenol market in Europe is showing signs of easing in April after springing back in the first quarter following a slump in the fourth quarter of 2023. Demand for polycarbonate steadied in April, following the rebound in the first quarter, but looked vulnerable to declines as steep price increases since January undermined consumption downstream. Phenol-acetone production returned in Spain, with the second of the two idled units restarting. A small unit in Finland will be offline for maintenance in the second half of April. Phenol and acetone production in Belgium has been idled since the fourth quarter of 2022, with no definite restart timeline.

ASIA-PACIFIC

Benzene

Benzene prices rose further this week with crude prices. Weakness in the gasoline and downstream styrene markets, along with the narrowing of arbitrage windows and rising benzene inventories in China, resulted in narrowing benzene-naphtha spread.

The Argus Asia benzene marker averaged \$1,069/t in the first three days of the week. This compared with last week's average of \$1,061/t. The benzene-naphtha spread narrowed, averaging \$363/t in the first three days of the week, compared with \$357/t the previous week.

Benzene stocks in east Chinese ports closed at 96,300t this week, 41pc higher than the previous week.

The import arbitrage into China remained narrow. The Chinese domestic spot benzene price averaged 8,808 yuan/t, or the import parity equivalence of \$1,057/t, in the first three

days of the week. This represented a \$12/t discount to the assessed fob South Korea prices. The freight costs to carry 3,000t of benzene from South Korea to mid China was quoted at \$35-37/t.

This compared with last week, when the Chinese domestic spot benzene price averaged Yn8,678/t, or the import parity equivalence of \$1,041/t, representing a \$20/t discount to published fob South Korea assessments.

Sinopec raised the list price of benzene on 5 April to Yn8,800/t, or the import parity equivalence of \$1,056/t.

Arbitrage opportunities with the US narrowed. The difference between month 2 benzene ddp Houston/Texas city and the fob South Korea marker averaged \$139/t in the first three days of the week, compared with last week's \$145/t. The spread has narrowed especially after accounting for administrative and financing costs. The freight costs to carry 40,000t

ASIA-PACIFIC

of benzene from South Korea to the US were quoted lower at \$116-119/t, compared to last week's \$120-123/t.

Tightness in the southeast Asian market, given the increase in LPG cracking, has finally priced itself in. Pertamina's tender to sell 12,000t of benzene for loading in the end of May was awarded to a Chinese buyer at teens discounts to published fob South Korea assessments. This compared with Lotte Titan's previous tender for benzene which loaded in the second half of March that was awarded at low-\$20s/t discounts.

Gasoline crack spread narrowed this week. Gasoline crack spread averaged \$15.01/bl in the first three days of the week. This compared with last week's average of \$16.08/bl. Producers' economics were tilted towards aromatics production this week. The premiums that PX-naphtha and benzene-naphtha spreads carried against gasoline crack averaged respectively at \$22.27/bl and \$24.13/bl in the first three days of the week. This compared with last week's averages of \$22.47/bl and \$22.35/bl.

Styrene

Styrene monomer (SM) prices in Asia Pacific rose further this week. Crude provided some support for prices, along with the continuing tightness in Europe.

The Argus Asia SM marker averaged \$1,165/t in the first three days of the week. This compared with last week's average over the same period \$1,153/t.

Prices in the domestic Chinese market averaged 9,700 yuan/t, or the import parity equivalence of \$1,164/t, in the first three days of the week. This represented a \$1/t discount premium to published cfr China assessments.

This compared with last week, when domestic Chinese prices averaged Yn9,573/t in the first three days of the week, or the import parity equivalence of \$1,148/t. This represented a \$5/t discount to published cfr China assessments.

SM futures closed at Yn9,490/t on 10 April, from Yn9,463/t at the close of 3 April.

In northeast Asia outside China, bids and offers were placed respectively at \$25/t and \$35/t premiums to published cfr China assessments for cargoes arriving in May. A producer in South Korea sold a May-loading volumes at \$35/t premiums to published cfr China assessments, according to market participants, though details remained sketchy. Producers are still gearing up for selling export cargoes for destinations to Europe, but firm bids have not come by yet, after a transaction was concluded last week at \$1,200/t fob.

Asia-Pacific prices					\$/t
	Timing	Low	High	Mid	±
Benzene					
cfr South Korea contract	Apr	1,029.85	1,070.00	1,049.93	
cfr Taiwan contract	Apr	1,047.85	1,070.00	1,058.93	
cfr Asean contract	Apr	1,023.85	1,070.00	1,046.93	
fob South Korea	1H May	1,072.00	1,090.00	1,081.00	+14.00
fob South Korea	2H May	1,071.00	1,090.00	1,080.50	+13.50
fob South Korea	1H Jun	1,047.00	1,062.00	1,054.50	+6.00
fob South Korea	2H Jun	1,047.00	1,062.00	1,054.50	+6.00
fob South Korea	1H Jul	1,032.00	1,062.00	1,047.00	-1.50
fob South Korea	Marker			1,070.92	+13.67
cfr China spot	Prompt	1,099.00	1,120.00	1,109.50	+14.00
cfr China month avg	Mar	1,064.85	1,071.00	1,067.93	+4.58
fob southeast Asia	Prompt	1,062.00	1,070.00	1,066.00	+23.50
ex-tank E China Yn/t	Prompt	8,700.00	8,850.00	8,775.00	+110.00
ex-tank E China	Prompt	1,043.37	1,061.36	1,052.37	+13.15
ex-works Sinopec Yn/t	Prompt			8,800	+150.00
ex-works Sinopec	Prompt			1,037.37	+11.95
Styrene					
cfr Taiwan contract	Mar	1,166.90	1,166.90	1,166.90	
cfr China	Apr	1,145.00	1,170.00	1,157.50	+5.00
cfr China	May	1,145.00	1,170.00	1,157.50	+5.00
cfr China	Marker			1,160.83	+8.33
fob northeast Asia	Apr	1,180.00	1,205.00	1,192.50	-7.50
cfr South Korea/Taiwan	Prompt	1,170.00	1,205.00	1,187.50	+7.50
ex-tank China Yn/t	Prompt	9,580.00	9,740.00	9,660.00	+97.50
ex-tank China	Prompt	1,148.91	1,168.09	1,158.50	+11.65
cfr India	Prompt	1,180.00	1,210.00	1,195.00	+5.00
ex-tank India Rs/kg	Prompt	105.00	107.00	106.00	+1.00
ex-tank India	Prompt	1,259.42	1,283.41	1,271.42	+14.21
Phenol					
ex-tank east China Yn/t	Prompt	7,350.00	7,500.00	7,425.00	+125.00
ex-tank east China	Prompt	853.00	870.00	861.50	+15.00

Benzene freight rates				\$/t
	Size t	4 Apr	11 Apr	
South Korea to China	3,000	37	36	
Thailand to mid China	6,000	43	42	
South Korea to Houston	6,000	165	161	
South Korea to Houston	12,000	158	154	

Asia-Pacific polystyrene markets				
	Yn/t	±	Import parity \$/t	±
China ex-works				
GPPS	9,900-9,950	150.0	1,126-1,132	18.0
HIPS	10,700-10,800	450.0	1,218-1,229	52.0
China spot cfr CMP price \$/t				
GPPS			1335.0 / 1370.0	17.5
HIPS			1430.0 / 1450.0	50.0

ASIA-PACIFIC

In India, prices remained relatively stable at 106 rupees/kg, compared with Rs105/kg last week. Offers of spot SM imports were placed at \$55-60/t premiums to published cfr China assessments.

SM production margins narrowed this week, averaging \$49.20/t in the first three days of the week. This compared with last week's average of \$54.59/t.

Polystyrene

The polystyrene (PS) market in China inched up this week with styrene monomer (SM) prices. Demand remained weak, according to market participants.

General purpose PS (GPPS) was quoted at 9,900-9,950 yuan/t, or the import parity equivalence of \$1,129/t. This compared with last week's Yn9,750-9,850/t, or the import parity equivalence of \$1,122/t. Fob China GPPS was also quoted higher at \$1,230-1,250/t.

High Impact PS (HIPS) was also quoted higher at Yn10,700-10,800/t, or the import parity equivalence of \$1,124/t. This compared with last week's Yn10,200-10,400/t, or the import parity equivalence of \$1,182/t. Fob China HIPS was higher at \$1,360-1,380/t.

GPPS-SM spread narrowed to Yn195/t, compared with Yn183/t a week ago. HIPS-SM spread widened to Yn1,025/t from Yn708/t at the same period.

Phenol

China's phenol prices rebounded this week after dipping to a two-and-a-half-month low of Yn7,200-7,300/t ex-tank Jiangsu at the end of March due to ample supplies.

Domestic trade prices in east China returned to Yn7,350-7,500/t ex-tank Jiangsu this week, up by Yn100-150/t from two weeks ago.

The rebound was mainly driven by a strong primary feedstock benzene market with domestic prices in east China

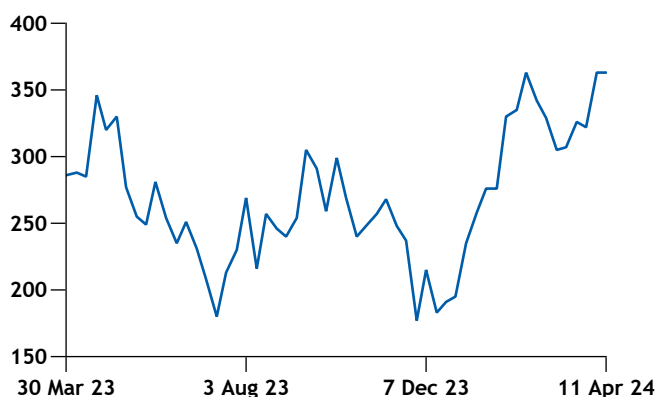
approaching a seven-month high towards the end of the assessment week. Producers and trading firms were pushing up phenol offers, without too much sales pressures at the beginning of the month and taking into account the negative phenol production margins.

But the rises in phenol prices are still less than benzene in the past two weeks. Non-integrated phenol margins in China fell to a two-month low of -\$151/t this week, down by \$19/t from two weeks ago. Other Asian non-integrated producers' margins worsened to -\$251/t this week, down by \$30/t from late March and the lowest since February 2023.

Facing deteriorating margins, Chinese phenol plants started a new round of production cuts this week. Sinochem Ruiheng, Huizhou Zhongxin No.1 and Shanghai Gaoqiao commenced their scheduled three-to-four weeks of maintenance in end of March or early April. Yangzhou Shiyou cut operating rates from 90pc to 60pc due to technical issues, while others including Sabic Tianjin, Changchun and Shenghong Petrochemical loaded down run rate by 10-20 percentage points mainly due to margins concerns. In late April, Sinopec Mitsui plans to shut plant for a major two-and-a-half turnaround.

Port inventories edged up to 29,000t this week, 2,000t more than two weeks ago amid slower consumption rates. Major downstream bisphenol A (BPA) prices firmed this week following higher phenol prices. But demand for phenol dropped because BPA producers enhanced production cuts since the beginning of April due to worsening margins.

South Korea benzene premium to Japan naphtha \$/t



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