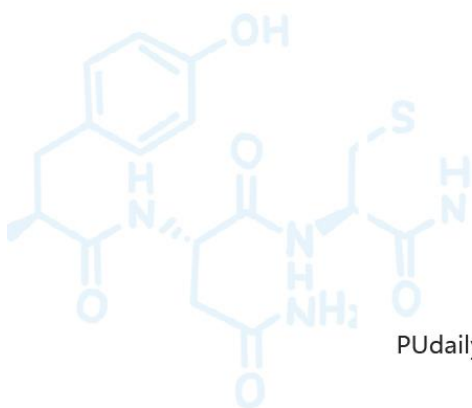




2022 ASIA PACIFIC POLYURETHANE Monthly Report

(Published by Suntower Consulting Limited)



PUdaily is the global brand of Suntower Consulting Limited

Content

1. General Statement	1
1.1 Polyurethane Market Overview and Forecast	1
1.2 Polyurethane Index Analysis.....	2
1.3 PUdaily Market View.....	2
1.3.1 MDI Production & Shipment Updates Under COVID-19.....	2
1.3.2 World No- Formaldehyde Day: About Formaldehyde-free Wood-based Panel	2
2. Polyurethane Raw Material Market	3
2.1 Isocyanate Industry Chain	3
2.1.1 Polymeric MDI	3
2.1.1.1 Market Overview	3
2.1.1.2 CNY & USD Prices	3
2.1.1.3 Asian MDI Facility Dynamics	4
2.1.1.4 Import & Export Data	4
2.1.1.5 Future Market Forecast	5
2.1.2 Pure MDI	6
2.1.2.1 Market Overview	6
2.1.2.2 CNY & USD Prices	6
2.1.2.3 Asian MDI Facility Dynamics (Refer to Polymeric MDI dynamics)	7
2.1.2.4 Import & Export Data	7
2.1.2.5 Future Market Forecast	7
2.1.3 TDI	8
2.1.3.1 Market Overview	8
2.1.3.2 CNY & USD Prices	8
2.1.3.3 Asian TDI Facility Dynamics.....	9
2.1.3.5 Future Market Forecast	9
2.1.3.4 Import & Export Data	9
2.2 PO/PPG Industry Chain	10
2.2.1 PO	10
2.2.1.1 Market Overview	10
2.2.1.3 China Propylene Oxide Facility Dynamics.....	11
2.2.1.4 Import & Export Data	12
2.2.1.5 Future Market Forecast	12
2.2.2 Polyether Polyols.....	12
2.2.2.1 Market Overview	12
2.2.2.2 CNY & USD Prices	13
2.2.2.3 China Polyether Polyols Facility Dynamics.....	14
2.2.2.4 Import & Export Data	15
2.2.2.5 Future Market Forecast	15
2.3.1 AA	16
2.3.1.1 Market Overview	16
2.3.1.2 CNY & USD Prices	16

2.3.1.3 China AA Facility Dynamics	16
2.3.1.4 Import & Export Data	17
2.3.1.5 Future Market Forecast	18
2.3.2 BDO.....	18
2.3.2.1 Market Overview	18
2.3.2.2 CNY & USD Prices	18
2.3.2.3 China BDO Facility Dynamics	18
2.3.2.4 Import & Export Data	19
2.3.2.5 Future Market Forecast	20
2.3.3 PTMEG.....	20
2.3.3.1 Market Overview	20
2.3.3.2 CNY & USD Prices	20
2.3.3.3 China PTMEG Facility Dynamics	21
2.3.3.4 Import & Export Data	21
2.3.3.5 Future Market Forecast	22
3. Southeast Asia & India PU Market	22
3.1 TDI	22
3.1.1 Market Overview	22
3.1.2 Price Trend.....	22
3.1.3 Forecast	23
3.2 MDI	23
3.2.1 Market Overview	23
3.2.2 Polymeric MDI Price Trend.....	23
3.2.3 Forecast	24
3.3 Polyether Polyols	24
3.3.1 Market Overview	24
3.3.2 Price Trend.....	24
3.3.3 Forecast	25
4. Polyurethane Products Market Analysis	25
4.1 Flexible Foam	25
4.3 PU Resin.....	26
5. Downstream Industries.....	26
5.1 Upholstered Furniture	26
5.2 Automobile.....	26
5.3 Home Appliances.....	27
5.4 Building Insulation.....	28
5.5 Light Leather	28
5.6 Footwear.....	28
5.7 Coatings.....	29
About Suntower Consulting Limited	30

Figure 1 China PU Index Trend 2022.....	2
Figure 2 2021 - 2022 China Polymeric MDI CNY & USD Price Trend.....	4
Figure 3 2021 - 2022 China Pure MDI CNY & USD Price Trend	6
Figure 4 2021 - 2022 China TDI CNY & USD Price Trend.....	8
Figure 5 2021-2022 PO Weekly Price Trend.....	11
Figure 6 2021-2022 China Polyols CNY Price Trend	14
Figure 7 2021-2022 China AA CNY Price Trend	16
Figure 8 2021-2022 China BDO CNY Price Trend	18
Figure 9 2021-2022 China PTMEG CNY & USD Price Trend	21
Figure 10 2021 - 2022 SE Asia & India TDI Price Trend.....	23
Figure 11 2021 - 2022 SE Asia & India Polymeric MDI Price Trend.....	24
Figure 12 2020-2022 SE Asia & India Polyether Polyols Price Trend	25
Table 1 Monthly Polymeric MDI CNY and USD Prices Comparison.....	3
Table 2 Asian MDI Facility Dynamics	4
Table 3 China Polymeric MDI Im/Export Flow in 2021-2022 (Tons)	4
Table 4 China Polymeric MDI Imports Top Origins in 2022 (Tons).....	5
Table 5 China PMDI Exports Top Destinations in 2022 (Tons)	5
Table 6 Monthly Pure MDI CNY and USD Prices Comparison	6
Table 7 China Pure MDI Im/Export Flow in 2021-2022 (Tons).....	7
Table 8 China Pure MDI Imports Top Origins in 2022 (Tons).....	7
Table 9 China Pure MDI Exports Top Destinations in 2022 (Tons)	7
Table 10 Monthly TDI CNY and USD Prices Comparison	8
Table 11 Asian TDI Facility Dynamics.....	9
Table 12 China TDI Im/Export Flow in 2021-2022 (Tons).....	9
Table 13 China TDI Exports Top Destinations in 2022 (Tons)	10
Table 14 Monthly PO CNY and USD Prices Comparison	10
Table 15 China Propylene Oxide Facility Dynamics	11
Table 16 China Propylene Oxide Im/Export Flow in 2022 (Tons)	12
Table 17 China PO Imports Top Origins in 2022 (Tons)	12
Table 18 Monthly Polyols CNY and USD Prices Comparison	13
Table 19 China Polyether Polyols Facility Dynamics.....	14
Table 20 China Polyols Im/Export Flow in 2022 (Tons)	15
Table 21 China Polyols Exports Top Destinations in 2022 (Tons)	15
Table 22 Monthly Adipic Acid CNY and USD Prices Comparison.....	16
Table 23 China AA Facility Dynamics	16
Table 24 China AA, its Salts and Esters Import/Export Flow in 2021 and 2022 (Tons)	17
Table 25 China AA, its Salts and Esters Exports Top Destinations in 2022 (Tons)	17
Table 26 Monthly BDO CNY and USD Prices Comparison	18
Table 27 China BDO Facility Dynamics	18
Table 28 China BDO Import/Export Flow in 2021 and 2022 (Tons).....	19
Table 29 Monthly PTMEG CNY and USD Prices Comparison	20

Table 30 China PTMEG Facility Dynamics.....	21
Table 31 China PTMEG Export/Import Flow in 2021 and 2022 (Tons)	21
Table 32 China PTMEG Imports Top Origins in 2022 (Tons)	22
Table 33 Monthly SE Asia & India TDI Prices Comparison	22
Table 34 Monthly SE Asia & India PMDI Prices Comparison	23
Table 35 Monthly Polyether Polyols Price Comparison.....	24
Table 36 China BHI Index in 2022.....	26
Table 37 China Auto Outputs & Sales in 2022 (Unit: 1,000 units)	26
Table 38 China Household Refrigerator Outputs in 2021-2022 (1,000 units)	27
Table 39 China Household Freezer Outputs in 2021-2022 (1,000 units)	27
Table 40 China Light Leather Outputs in 2021 (Unit: square kilometers).....	28
Table 41 China Leather Shoes and Boots Outputs in 2021 (Unit: 100 million pairs)	28

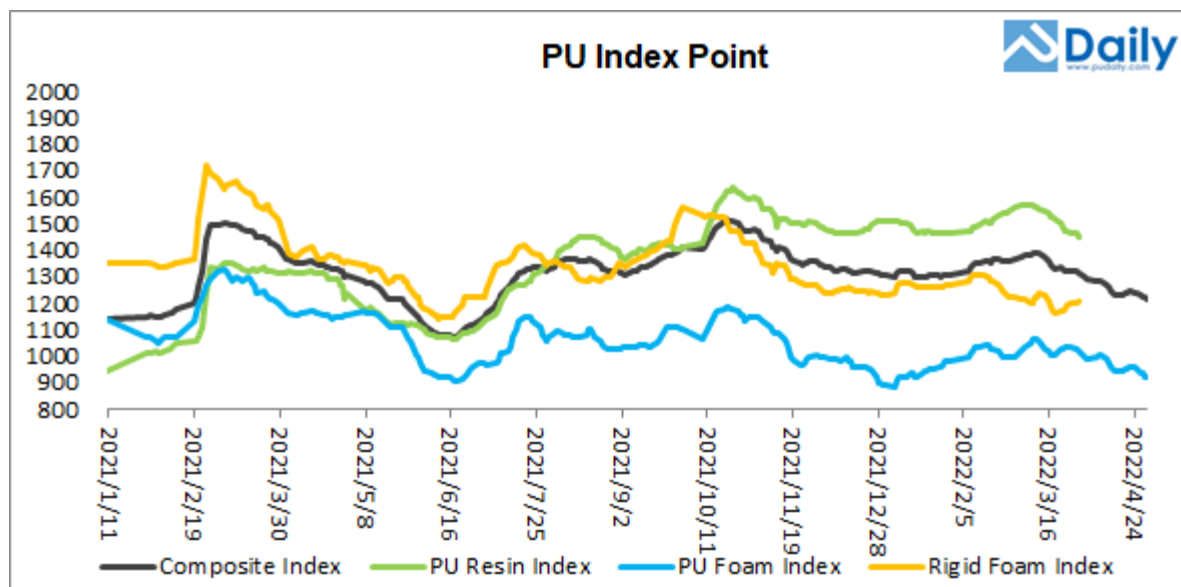
1. General Statement

1.1 Polyurethane Market Overview and Forecast

(CNY/Ton)	Apr. Avg.	Mar. Avg.	Up & Down	Remarks	Overview & Forecast
PO	11,120-11,300	11,920-12,100	-800, -800	Drum/ DEL	O: China PO market fell in April. F: China PO market is expected to be weak in May.
TDI	17,848-18,627	19,040-19,620	-1192,-993	Drum/ DEL	O: China TDI market declined in April. F: China TDI market is expected to decline in May.
Flexible Slabstock Polyols	11,620-11,780	12,580-12,840	-960;-1060	Bulk/ DEL	O: China flexible slabstock polyols market fell in April. F: China flexible slabstock polyols market is expected to be weak in May
Polymeric MDI	18,610-18,823	18,819-19,277	-209, -454	Drum/ DEL	O: China polymeric MDI market consolidated weakly in April. F: The polymeric MDI market is anticipated to be stable-to-increase in May.
Pure MDI	21,780-22,380	23,477-23,932	-1697, -1552	Drum/ DEL	O: China pure MDI market ran weakly in April. F: China pure MDI market is anticipated to consolidate narrowly in May.
Adipic Acid	12,000-12,252	13,326-13,758	-1,326, -1,506	On Bank draft/DEL	O: China AA market dropped in April. F: China AA market is expected to remain relatively weak in May.
BDO	25,293-25,600	27,855-28,274	-2,562, -2,674	Bulk/DEL	O: China BDO market declined substantially in April. F: China BDO market is expected to fluctuate in May.
PTMEG (2000)	42,931-44,000	43,000-44,000	-69, 0	Drum/Ex-factory	O: China PTMEG market consolidated in April. F: China PTMEG market is expected to be under consolidation in May.

1.2 Polyurethane Index Analysis

Figure 1 China PU Index Trend 2022



The PU composite index declined in April dragged by all raw materia, especially pure MDI and AA due to lurewarm demand caused by spreading COVID-19 pandemic and blocked transport.

The soft foam index is down in April. Besides negative factors of epidemic and the logistics in many areas of China were hindered, resulting in longer transportation cycle, while the demand was also hit hard under the epidemic. Wanhua took the lead in lowering the settlement price in the first half of this month, and thus traders became pessimistic and accelerated deliveries. Then the range of TDI market prices dropped rapidly for several days.

The rigid foam index fell in April. In supply-end, some MDI and Rigid polyols suppliers encountered goods delivery limitation because of strict lock-down measures; in downstream-end, the demand from main downstream sectors in April were dropped dramatically by epidemic and its corresponding logistic outage.

The resin index declined in April. Due to the impact of COVID-19 pandemic and blocked transport, downstream manufacturers kept their operating rates low and therefore had sluggish demand. The price of AA was down, and that of BDO fell significantly, driving down THF price. The PTMEG price declined, mainly because downstream spandex manufacturers reduced their prices under great inventory pressure. The sluggish demand from non-spandex products manufacturers also put downward pressure on PTMEG price.

1.3 PUdaily Market View

1.3.1 MDI Production & Shipment Updates Under COVID-19

PUdaily,Shanghai –

Recently, the pandemic situation remained grave across China. A majority of the new confirmed cases and asymptomatic cases of COVID-19 in these days are concentrated in Shanghai. At present, manufacturers in Shanghai are facing blocks in production and shipment. On average, they have lowered down loads by around 20 percentages compared with that in the end of last month. Although some manufacturers' logistics have had / are applying provisional transportation passes, they mainly priority shipment to their key accounts, with few spot goods going to the distribution channels currently. View online of PUdaily original articles: <https://www.pudaily.com/News/NewsView.aspx?nid=106425>

1.3.2 World No- Formaldehyde Day: About Formaldehyde-free Wood-based Panel

PUdaily,Shanghai –

April 26, 2022 was the 8th World No- Formaldehyde Day. The market share of formaldehyde-free wood-based panels increases significantly. China is the world's largest producer, consumer and trader of wood-based panels. The annual production and consumption of wood-based panels reaches about 300 million cubic meters. However, China's wood-based panel industry faces problems such as high pressure on the supply of wood resources, serious environmental protection and safety production issues, low market concentration....

View online of PUDaily original articles: <https://www.pudaily.com/News/NewsView.aspx?nid=106771>

2. Polyurethane Raw Material Market

2.1 Isocyanate Industry Chain

2.1.1 Polymeric MDI

2.1.1.1 Market Overview

China polymeric MDI market consolidated weakly in April.

In Supply end, MDI manufacturers in Shanghai had to drop the production rate and ran with the lowest load (50%~60%) in this month because Shanghai was under lockdown. Some of their deliveries to North China and South China were changed from land transportation to water transportation as the highway transportation was blocked. Meanwhile, the lockdown also impacted on the polymeric MDI import and export trades in Shanghai ports. The production of Wanhua Ningbo and Wanhua Yantai was stable. Wanhua goods' delivery to Shanghai and other epidemic control areas were impacted, while delivery to other areas was normal. The whole production in this month was declined by around 13% compared with that in last month.

In demand end, the demand from main downstream sectors in April were dropped dramatically by epidemic and its corresponding logistic outage. Home appliance: some home appliance factories shut down or load down due to the upstream raw materials supply shortage or unstable, the exporting business domestic refrigerators manufacturers also shrank, the demand from home appliance is expected to be declined by at least 10%. The similar situation in automotives, main automotives factories in Shanghai and Jilin shut down or under low-load production, it is expected that the output of automotives in this month will be declined by around 20%. Because of raw material shortage as well as the epidemic, the outdoor insulation projects in some areas of North China have been closed from middle of March. The demands from panel and reefer containers are expected to also be declined by 20~30% this month. It is worthy to mention that the demand from wood-binder in April increased, benefitting from strong consumer demand for aldehyde-free boards.

By Apr 29, the market prices of polymeric MDI are around RMB 18,400-18,500/ton, down by RMB 1,000~1,200/ton compared with the prices in the end of last month.

2.1.1.2 CNY & USD Prices

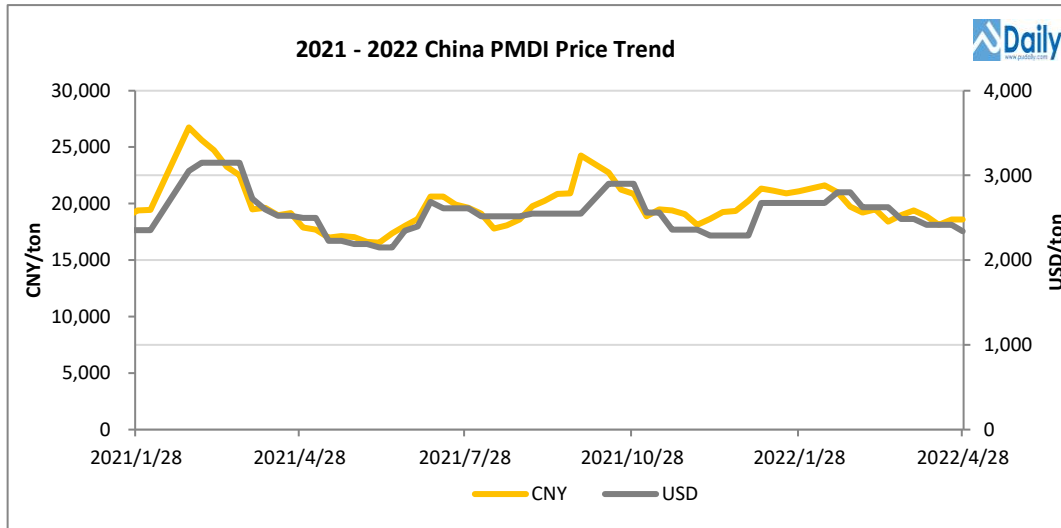
Table 1 Monthly Polymeric MDI CNY and USD Prices Comparison

Types	Unit	Apr. Average Price	Mar. Average Price	Fluctuation	Remarks
China	CNY/ton	18,610-18,823	18,819-19,277	-209, -454	Drum/DEL
Imports	USD/ton	2,407-2,407	2,545-2,646	-138, -239	Drum/CIF

Notes: ① CNY Cost=USD CIF price *(1+13%)*(1+6.5%) *Exchange Rate+ Import Port Charge (Only available for calculating the costs of China MDI imports. 13%: VAT rate; 6.5% (from Japan): Import duty rate.

The USD price for imported sources in the table is the quotation range from both South Korea (KMCI) and Japan (Tosoh).

Figure 2 2021 - 2022 China Polymeric MDI CNY & USD Price Trend



Note: ① CNY refers to E-China, Drum/Ex-Factory; ②USD refers to Drum/CIF China.

2.1.1.3 Asian MDI Facility Dynamics

Table 2 Asian MDI Facility Dynamics

Producer	Plant Location	Capacity (kt/a)	Production Rate
Wanhua Chemical (Ningbo) Co., Ltd.	Ningbo, China	1200	90%, normal operation.
Wanhua Chemical Group Co., Ltd.	Yantai, China	1100	80%
Covestro	Shanghai, China	600	60%, load down.
BASF Chongqing	Chongqing, China	400	90%, normal operation.
Shanghai Lianheng Isocyanate Co., Ltd.#	Shanghai, China	590	60%, load down.
Shanghai BASF Polyurethane Co., Ltd.*	Shanghai, China	210	60%, load down.
Huntsman (Shanghai) Polyurethane Co., Ltd.*	Shanghai, China	400	60%, load down.
Tosoh (Ruian) Co., Ltd.*	Zhejiang, China	80	90%, normal operation.
Total capacity in China			3,890
Average Operation loads			78% load
Tosoh Corporation	Nanyo, Japan	400	95%. Normal operation. The units with capacity as 200 kt/a shut down for turnaround from end of April for 1 month, then back to normal production in middle of June.
Kumho Mitsui Chemicals Inc.	Yeosu, South Korea	410	100%, normal operation. Will shut down for turnaround from May 9 to June 8.
BASF Urethane Co., Ltd.	Yeosu, South Korea	250	80%, normal operation.
Sadara Chemical Company	Saudi Arabia Jubail	400	Normal operation.
Karun	Tehran, Iran	40	77%
Total capacity in Asia			5,390
Average Operation loads			82% load

Note: ① “#” means the producer only has synthesis facility.

② “*” means the producer only has distillation facility.

③ Total capacity is calculated on mother liquid.

2.1.1.4 Import & Export Data

Table 3 China Polymeric MDI Im/Export Flow in 2021-2022 (Tons)

Month (HS Code: 39093100)	Import		Export	
	2021	2022	2021	2022
Jan.	27,616	16,738	65,853	82,724

Feb.	26,381	20,098	90,623	58,659
Mar.	28,294	28,890	105,585	100,346
Apr.	21,206		81,782	
May	28,398		112,768	
Jun.	22,915		76,322	
Jul.	28,492		78,702	
Aug.	21,013		85,219	
Sep.	26,677		89,662	
Oct.	23,856		74,088	
Nov.	29,170		78,352	
Dec.	13,540		74,654	
Jan. ~ Mar. Total	82,291	65,726	262,060	241,728
Mar. Year on Year	—	2.1%	—	-5.0%
Mar. Month on Month	—	43.7%	—	71.1%

Table 4 China Polymeric MDI Imports Top Origins in 2022 (Tons)

(HS Code: 39093100)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Japan	9806	7345	10296										27447
South Korea	6198	7005	4355										17558
Saudi Arabia	400	5382	11662										17444

Table 5 China PMDI Exports Top Destinations in 2022 (Tons)

Country	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
USA	24833	14142	31556										70531
Netherlands	8461	2959	11065										22485
South Korea	4773	4655	6487										15915
India	4951	4109	6219										15279
Canada	4599	2157	7452										14208
Vietnam	5175	2551	3157										10883
Thailand	4395	2679	3152										10226
UAE	2034	2578	5358										9970
Mexico	3082	3606	2695										9383
Japan	2902	2365	1949										7216
Month Total	82724	58659	100346										241728

2.1.1.5 Future Market Forecast

Supply market: It is expected that with the improvement of epidemic situation in Shanghai, the logistic transportation and delivery limitation issues will be relieved gradually. BASF Shanghai and Huntsman Shanghai will shut down for turnaround in 2nd half of this May. Meanwhile, KMCI and Tosoh Japan will also shut down for turnaround in this May. It is expected that the whole supply volume in Asia/China will remain tightening.

Demand market: It is expected that the demand market will recover gently in May if the epidemic situation turns better. The demand from home appliance is expected to rebound in May, the consumption of freezers and refrigerators is driven by food stockpile from both household and commercial sides. The demand from other downstream sectors like insulation engineering, panel and pipes is expected to be stable or slowly recover.

The market price of polymeric MDI in May is estimated to be stable-to-increase.

2.1.2 Pure MDI

2.1.2.1 Market Overview

China Pure MDI market price ran weakly in April. In supply-end, the logistic blocked of Shanghai manufacturers obviously existed in the whole month, resulting in tight supply of drum in the distribution market. The transaction of China pure MDI ran weakly and sluggishly. In demand-end: The demand from sole resin, resin market for synthetic leather and TPU manufacturers were decreased this month, who were affected by the epidemic and some production orders outflow, as well as seasonal factors, which leads to poor order receiving. and the demand for pure MDI and other raw materials were sluggish. The demand from spandex factories maintained stable this month, according to the contract delivery. By Apr 29, the market prices are around CNY 21,600-22,200/ton, down by CNY 300-400/ton compared with the prices in the end of last month.

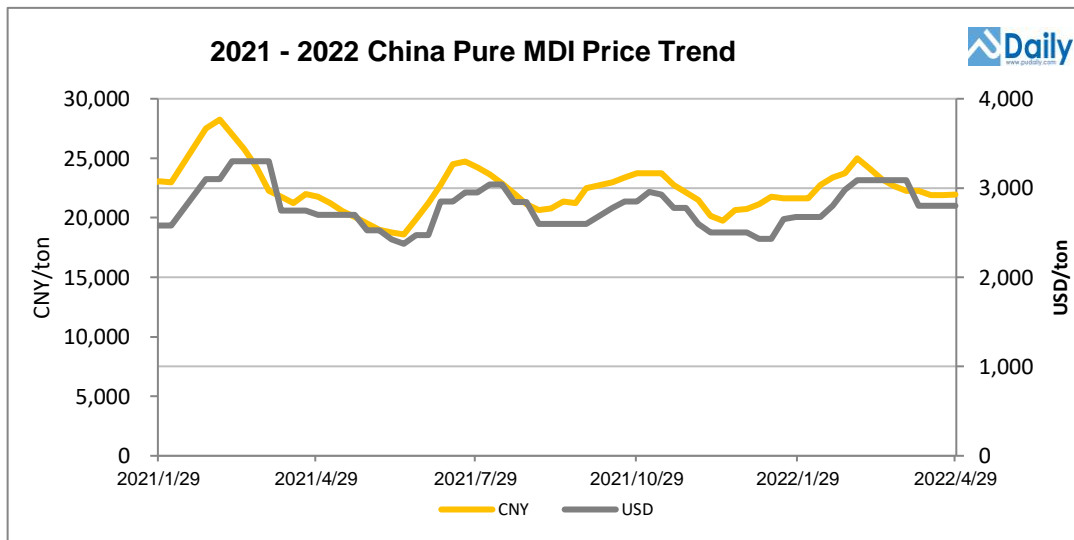
2.1.2.2 CNY & USD Prices

Table 6 Monthly Pure MDI CNY and USD Prices Comparison

Types	Unit	Apr. Average Price	Mar. Average Price	Fluctuation	Remarks
China	CNY/ton	21,780-22,380	23,477-23,932	-1697, -1552	Drum/DEL
Imports	USD/ton	2,839-2,880	2,980-3,179	-141, -299	Drum/CIF

Note: CNY Cost = USD CIF price * (1+13%) * (1+6.5%) * Exchange Rate + Import Port Charge (Only available for calculating the costs of China pure MDI imports. 13%: VAT rate, 6.5%: import duty rate.

Figure 3 2021 - 2022 China Pure MDI CNY & USD Price Trend



Note: ① CNY refers to E-China, Drum/Ex-Factory;

② USD refers to Drum/CIF China.

2.1.2.3 Asian MDI Facility Dynamics (Refer to Polymeric MDI dynamics)

2.1.2.4 Import & Export Data

Table 7 China Pure MDI Im/Export Flow in 2021-2022 (Tons)

Month (HS Code: 29291030)	Import		Export	
	2021	2022	2022	2022
Jan.	6,263	5,595	10,747	10,063
Feb.	3,998	4,619	10,506	9,107
Mar.	9,817	8,166	12,470	10,575
Apr.	4,479		10,663	
May	4,814		9,327	
Jun.	5,419		9,376	
Jul.	4,788		7,657	
Aug.	6,445		8,598	
Sep.	6,564		11,907	
Oct.	5,190		8,495	
Nov.	7,600		11,356	
Dec.	4,968		9,904	
Jan. ~ Mar. Total	20,078	18,381	33,723	29,686
Mar. Year on Year	—	-16.8%	—	-15.7%
Mar. Month on Month	—	-76.8%	—	15.5%

Table 8 China Pure MDI Imports Top Origins in 2022 (Tons)

(HS Code: 29291030)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
South Korea	3399	2362	4629										10390
Japan	2189	2256	3519										7964
Others	7	1	0										8
Month Total	5595	4619	8166										18380

Table 9 China Pure MDI Exports Top Destinations in 2022 (Tons)

(HS Code: 29291030)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Chinese Taiwan	1258	1494	1486										4238
Brazil	1283	1143	948										3374
India	1265	498	1400										3163
Vietnam	1047	1224	621										2892
Pakistan	674	1187	724										2585
Others	4537	3562	5336										13435
Month Total	10063	9107	10515										29685

2.1.2.5 Future Market Forecast

Supply market: During the April, the pure MDI manufacturers in East China faced the supply shortage of packaging materials due to logistics blockage caused by the epidemic, resulting in a low supply of drums. Whether the situation will improve or not in May depends on

the improvement of the epidemic and transport capacity improvement in Shanghai and Jiangsu and Zhejiang provinces. In May, some manufacturers in Shanghai, Japan and South Korea conducted routine maintenance of their devices. KMCI in South Korea closed the quotation to Chinese market in May. China's mainstream pure MDI manufacturers slightly lower list prices of pure MDI in May, which is expected to maintain market price of pure MDI stable or narrowly consolidate in May.

Demand market: With the improvement of the epidemic situation in Shanghai and other areas in China, downstream manufacturers' demand for pure MDI may have a restorative increase. However, in recent months, the occurrence of the epidemic in China has led to the outflow of orders from some downstream manufacturing industries, which has exerted an impact on domestic downstream industries such as shoes, textiles and bags.

The market price of pure MDI in May is estimated to consolidate narrowly.

2.1.3 TDI

2.1.3.1 Market Overview

Chinese TDI market declined in April. The negative factors of epidemic continued during the month. The logistics in many areas of China were hindered, resulting in longer transportation cycle, while the demand was also hit hard under the epidemic. In addition, Wanhua took the lead in lowering the settlement price in the first half of this month, and thus traders became pessimistic and accelerated deliveries. Then the range of market prices dropped rapidly for several days. But from mid-April, after the large decline of prices, traders were worried about losses due to the high settlement prices from suppliers, and tended to be cautious, so low quotations in the market were gradually reduced, and the range of negotiated prices moved up slightly. However, as the settlement prices of major suppliers continued to decline with the market, and the downstream demand remained weak, the negotiated prices of actual orders declined continuously.

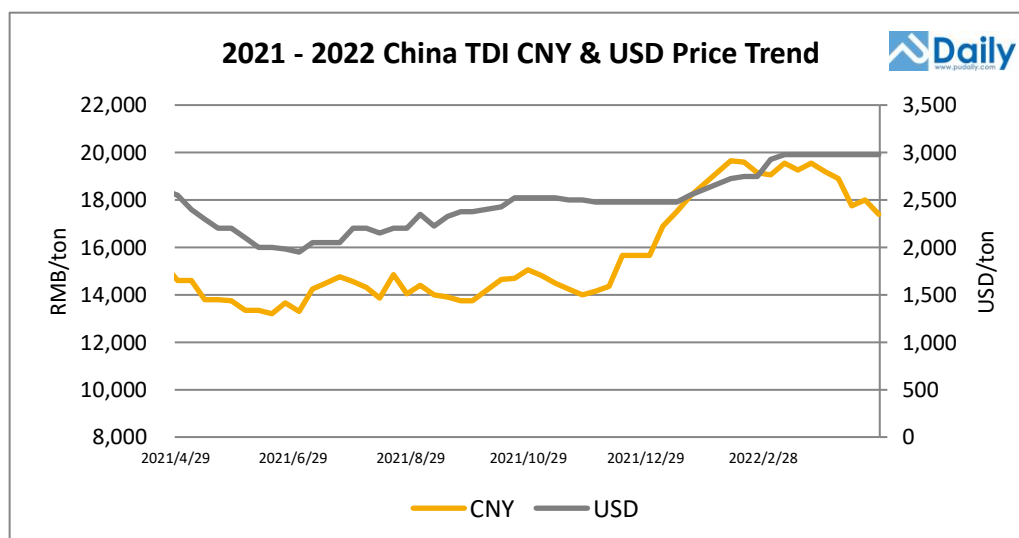
2.1.3.2 CNY & USD Prices

Table 10 Monthly TDI CNY and USD Prices Comparison

Types	Unit	Apr. Average Price	Mar. Average Price	Fluctuation	Remarks
China	CNY/ton	17,848-18,627	19,040-19,620	-1192, -993	Drum/DEL
Imports	USD/ton	2,900-3,050	3,000-3,050	-100,0	Drum/CIF

Note: CNY Cost = USD CIF price * (1+13%) * (1+6.5%) * Exchange Rate + Import Port Charge (Only available for calculating the costs of China TDI imports. 13%: VAT rate, 6.5%: import duty rate; Anti-dumping rate depends on origins).

Figure 4 2021 - 2022 China TDI CNY & USD Price Trend



Note: ①CNY refers to E-China, Drum/DEL;

②USD refers to Spot Price Drum/CIF China

2.1.3.3 Asian TDI Facility Dynamics

Table 11 Asian TDI Facility Dynamics

Supplier	Location	Capacity (Kt/a)	Week Average Production rate
Covestro (China) Co., Ltd.	Shanghai, China	310	65%.The load is slightly reduced.
Shanghai BASF Polyurethane Co., Ltd.	Shanghai, China	160	65%.The load is slightly reduced.
Wanhua Group	Yantai, Shandong	300	100%.Normal operation.
Wanhua Fujian (Formerly known as SEEC)	Fuzhou, Fujian	100	Around 30%.
Cangzhou Dahua Group Co., Ltd.	Hebei, China	150	100%.Normal operation.
Gansu Yinguang Chemical Industry Group Co., Ltd.	Gansu, China	120	0%.Under maintenance.
Yantai Juli Isocyanate Co., Ltd.	Shandong, China	80	0%.On May 16, the TDI unit in Yantai was shut down for maintenance, and it has not started yet.
Xinjiang Juli Co., Ltd	Xinjiang, China	150	10%.Maintenance began in early April and restarted on April 28.
Lianshi Chemical	Huludao, Liaoning	50	0% load, under maintenance.
Total capacity in China			1,420
Avg. Operation Loads in China			54%
Mitsui Chemicals & SKC Polyurethanes Inc.	Omuta, Japan	120	30%.
BASF Urethane Co., Ltd.	Yeosu, South Korea	160	100%.
Hanwha Chemical (KPX Fine Chemical)	Yeosu, South Korea	150	96%
OCI Company Ltd.	Kunsan, South Korea	50	96%
Gujarat Narmada Valley Fertilizer Company Limited	Bharuch, India	17	100%
Gujarat Narmada Valley Fertilizer Company Limited	Dahej, India	50	100%
KARUN	BIK Port (BANDAR IMAM KHOMEIN)	40	100%
Sadara	Al Sharqiya, Saudi Arabia	200	77%
Total capacity in Asia and Middle East			2,207
Avg. Operation Loads in Asia			86%

2.1.3.5 Future Market Forecast

Chinese TDI market is expected to run weakly in May. At present, the epidemic situation in China is still severe. Although the resumption of work and production has begun in some areas, but sporadic cases are emerging, and anti-epidemic measures are still in place. The recovery of logistics and industrial chain may take a certain time. Moreover, there is no sign of improvement in end demand due to the lingering epidemic. If the epidemic situation eases, downstream demand is expected to increase, but it still needs to wait. Therefore, Chinese TDI market is expected to be weak at the beginning of May. It is not ruled out that the price may continue to decrease under traders' positive intention to ship goods, and we will focus on the demand trend in mid to late May.

2.1.3.4 Import & Export Data

Table 12 China TDI Im/Export Flow in 2021-2022 (Tons)

Month	Import		Export	
(HS Code: 29291010)	2021	2022	2021	2022
Jan.	1,328	202	33,304	38,288
Feb.	949	1,218	25,455	16,960
Mar.	705	15,15	46,358	31,094
Apr.	1,560		36,622	
May	877		37,134	
Jun.	1,750		21,299	
Jul.	1,654		23,817	

Aug.	1,667		23,642	
Sep.	2,442		21,655	
Oct.	1,464		26,886	
Nov.	1,116		36,550	
Dec.	588		37,186	
Jan. ~ Dec. Total	16,098	2,935	369,909	86,342
Mar. Year on Year	--	24.35%	--	83.34%
Mar. Month on Month	--	114.89%	--	-32.93%

Table 13 China TDI Exports Top Destinations in 2022 (Tons)

Destination	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Indonesia	3,405	1,125	2,385									
Belgium	2,997	0	0									
Brazil	2,746	895	4,037									
Taiwan, China	2,704	410	1,000									
Russia	2,144	960	640									
Vietnam	1,655	2,440	1,925									
Mexico	1,517	500	306									
United Arab Emirates	1,220	320	1,220									
India	1,160	920	1,480									
Kenya	1,120	460	820									
Others	17,621	8,929	17,281									
Month Total	38,288	16,960	31,094									

2.2 PO/PPG Industry Chain

2.2.1 PO

2.2.1.1 Market Overview

The PO market consolidated in April. At the beginning of the month, the rigid demand in the PO market rebounded after the Qingming Festival, but the persistence of polyether polyol orders was not good, the overall market tended to be dull and deserted under the continuous control of all parties. coupled with the limited cost support, PO fell continuously. In the middle of the month, propylene fluctuated around 8500 CNY/ ton, liquid chlorine rose to 1350-1700 CNY / ton, the cost of PO was quickly pulled up, the chlorohydrin process turned into a theoretical loss again, and the manufacturers were willing to make an offer again. After a brief stalemate at the price of 11100 CNY / ton, PO factory offer lower quotation to promote shipments as the inventory was under pressure but the performance was lacklustre under multi-party restrictions on the demand side, although it was approaching the May Day holiday. The main downstream polyether polyol orders did not improve significantly, resulting in a continuous decline in the market.

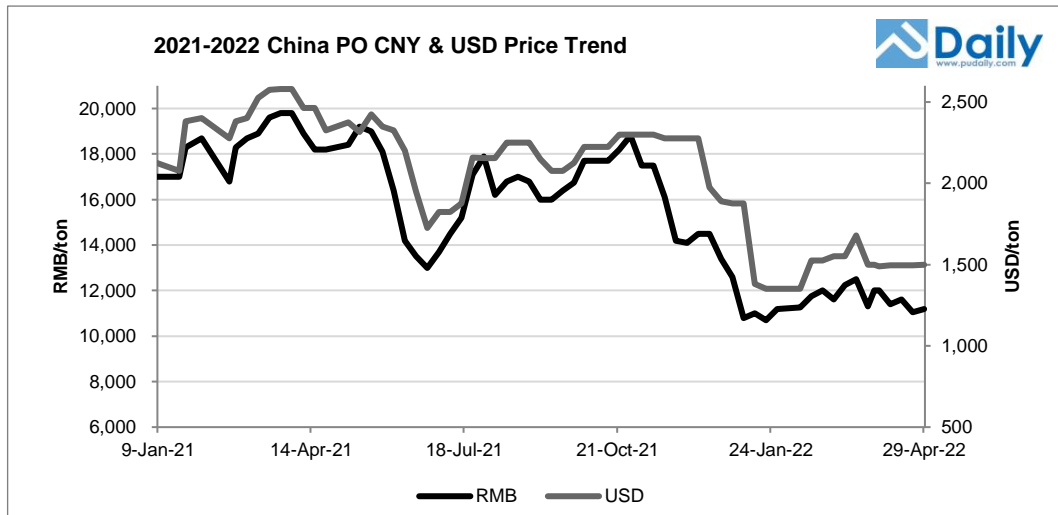
2.2.1.2 CNY & USD Prices

Table 14 Monthly PO CNY and USD Prices Comparison

Types	Unit	Apr. Average Price	Mar. Average Price	Fluctuation	Remarks
China	CNY/ton	11,120-11,300	11,920-12,100	-800, -800	E-China; Bulk/DEL
Imports	USD/ton	1,490-1,495	1,544-1,544	-54, -49	Bulk/CFR

Notes: ① CNY Cost=(USD CFR price +Insurance)*(1+13%)*(1+5.5%) *Exchange Rate+ Import Port Charge (Only available for calculating the costs of China PO imports. 13%: VAT rate; 5.5%: Import duty rate but Singapore with zero duty).

Figure 5 2021-2022 PO Weekly Price Trend



Note: ①CNY refers to E-China, DEL & cash payment;

②USD refers to ex-tank East China;

2.2.1.3 China Propylene Oxide Facility Dynamics

Table 15 China Propylene Oxide Facility Dynamics

Producer	Plant Location	Capacity (kt/a)	Production Rate
Wudi Xinyue Chemical Co., Ltd.	Binzhou, Shandong	350	96%
CNOOC and Shell Petrochemicals Company Limited	Huizhou, Guangdong	620	95%
Jishen Chemical Industry Co., Ltd.	Jilin, Jilin	300	71%
Ningbo ZRCC Lyondell Chemical Co., Ltd.	Ningbo, Zhejiang	585	95%
Jinling Huntsman New Materials Co., Ltd.	Nanjing, Jiangsu	240	100%
Shandong Befar Group Co., Ltd.	Binzhou, Shandong	280	70%
Wanhua Chemical	Yantai, Shandong	540	95%
Shandong Jinling Chemical Co., Ltd.	Dongying, Shandong	160	100%
Shandong Sanyue Group Co., Ltd.	Binzhou, Shandong	240	90%
Tianjin Dagu Chemical Co., Ltd.	Tianjin	150	0%
Hangjin Technology Co., Ltd. (used to be Fangda Jinhua Chemicals)	Huludao, Liaoning	120	80%
Sinopec Changling Refining & Chemical Company	Yueyang, Hunan	100	90%
Sinochem Quanzhou Petrochemical.	Quanzhou, Fujian	200	100%
Shandong Daze Chemical Co., Ltd.	Heze, Shandong	100	50%
Shandong Huatai Chemical Co., Ltd.	Dongying, Shandong	80	76%
Shandong Shida Shenghua Chemical Co., Ltd.	Dongying, Shandong	70	90%
Shandong Zhonghai Fine Chemical	Binzhou, Shandong	62	0%
Meizhouwan Chloralkali Chemical Industry Co., Ltd.	Quanzhou, Fujian	50	0%
Hongbaoli Group Co., Ltd.	Taixing, Jiangsu	120	80%
Total			4,367
Average Monthly Production Rate			79%

2.2.1.4 Import & Export Data

Table 16 China Propylene Oxide Im/Export Flow in 2022 (Tons)

Month (HS Code: 29102000)	Import		Export	
	2021	2022	2021	2022
Jan	46,486	32,548	18	
Feb	49,362	22,524	0	
Mar	39,127	35,548	0	
Apr	29,331		0	
May	25,368		0	
Jun	45,068		0	
Jul	32,566		0	
Aug	25,235		0	
Sep	34,766		156	
Oct	40,692		96	
Nov	24,927		2153	
Dec	40,844		0	
Total	290,706		2,423	
Mar. Year on Year	—	-9.15%	—	
Mar. Month on Month	—	57.82%	—	

Table 17 China PO Imports Top Origins in 2022 (Tons)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Saudi Arabia	16,041	13,948											
Thailand	11,262	5,302											
Singapore	0	0											
USA	0	0											
S. Korea	5,210	3,274											

2.2.1.5 Future Market Forecast

Chinese PO market is expected to be weak in May. At present, the epidemic situation in China is still severe. Although the resumption of work and production has begun in some areas, but sporadic cases are emerging, and anti-epidemic measures are still in place. The recovery of logistics and industrial chain may take a certain time. Moreover, there is no sign of improvement in end demand due to the lingering epidemic. If the epidemic situation eases, downstream demand is expected to increase, but it still needs to wait. Furthermore, new PO unit is expected to put into production at the end of the May Chinese PO market is expected to be weak in May. It is not ruled out that the price may continue to decrease under traders' positive intention to ship goods, and we will focus on the demand trend in mid to late May.

2.2.2 Polyether Polyols

2.2.2.1 Market Overview

Polyether polyol market consolidated in April. The price of polyether polyol inquiry and questioning before and after Ching Ming Festival has improved as a whole compared with the previous period, especially on the first day after the festival, the effect is more obvious, the main downstream inventory has been exhausted, the rigid demand replenishment is more concentrated, and the order of polyether polyol plant is higher than expected. The epidemic situation and blocked turnover in the middle of the month are still negative factors, the production and marketing of downstream sponge factories are also weak and the consumption speed of rigid demand is also slowing down. Dongda

and Dexin are under maintenance briefly, and the overall volume of goods in the market is abundant, and some large factories have discussed low prices one after another. Near the end of the month, the price reduction of PO had little effect, and the support of boundless orders led to the continuous decline of polyether polyol. Coupled with the lack of start-up on the demand side and the hindrance of transportation, the operators lacked confidence in the future, and it was difficult to have positive attitude towards market later.

Flexible Polyols

China flexible polyols market holds as of April 29. PO price holds steady, lending fairly strong support to slab polyols price. Although the holiday is approaching, buyers' interest in stocking inventories is much weaker than expected. Thus slab polyols manufacturers actively sell by discussing prices with buyers. The prevailing offers in Shandong market stand at CNY 11,000-11,200/ton EXW in bulk in cash. And those in East China and South China are CNY 11,100-11,300/ton DEL in bulk in cash.

Flexible High Resilience Polyols

China HR polyols market remains stable as of April 29. Offers for 330N in Shandong and North China stand at CNY 11,500-12,000/ton EXW in bulk in cash. Those in East China market are CNY 12,400-12,800/ton DEL in drum in cash.

Polymer Polyols

China POP market remains weak as of April 29. The prevailing offers for POP2045 in Shandong and North China markets stand at CNY 11,800-12,100/ton EXW in bulk in cash. Those in East China are CNY 12,000-12,300/ton DEL in bulk. The prevailing offers for POP3628 in Shandong and North China markets stands at CNY 12,100-12,400/ton EXW in bulk in cash. Those in East China are CNY 12,400-12,600/ton DEL in bulk.

CASE Polyols

China CASE polyols market declines as of April 29, with trading becoming thin. The prevailing offers for Shandong- and North China-originated cargoes stands at CNY 11,500-12,000/ton EXW in bulk in cash. Those in East China are CNY 12,200-12,600/ton DEL in drum.

Rigid Polyols

China rigid polyols market moves sideways as of April 29. PO manufacturers stabilize their offers after falling, but the move has limited stimulating effect on demand. Due to the impact of COVID-19 pandemic, transport is blocked and projects in end-use sectors are suspended, resulting in slow consumption of raw materials. This forces rigid polyols manufacturers to promote sales by discussing prices with buyers. The prevailing offers for conventional rigid polyols 4110 in Shandong market stand at CNY 10,500-11,000/ton EXW in drum in cash. Those in East China market are CNY 10,700-11,100/ton EXW in drum in cash.

2.2.2.2 CNY & USD Prices

Table 18 Monthly Polyols CNY and USD Prices Comparison

Products	Types	Unit	Apr. Average Price	Mar. Average Price	Fluctuation	Remarks
Flexible Polyols	China	CNY/ton	11,620-11,780	12,580-12,840	-960;-1060	Bulk/DEL
	Import	USD/ton	1,825-2,013	1,938-2,050	-113;-37	Drum/CIF
	Export	USD/ton	1,720-1,788	1,850-1,925	-130;-137	Drum/FOB
Flexible Polyols (HR)	China	CNY/ton	12,780-13,140	13,640-14,080	-860;-940	Drum/EXW
	Export	USD/ton	1,788-1,863	1,950-2,048	-162;-185	Drum/FOB
POP (slabstock)	China	CNY/ton	12,420-12,640	12,960-13,320	-540;-680	Drum/EXW
	Export	USD/ton	1,788-1,838	1,888-2,000	-100;-162	Drum/FOB
POP (HR)	China	CNY/ton	12,720-12,960	13,260-13,640	-540;-680	Drum/EXW
Elastomer Polyols	China	CNY/ton	12,800-13,160	13,460-13,860	-660;-700	Drum/EXW

	Export	USD/ton	1,800-1,888	1,975-2,050	-175;-162	Drum/FOB
Rigid Polyols	China	CNY/ton	10,880-11,260	11,260-11,660	-380; -400	Drum/EXW

Note: **China:** ① Flexible Slabstock Polyols brands: 5623, 5613, 560S, 3031K, 5616, etc;

② Flexible Polyols (HR) brands: 330N, 820, 703, 3603, etc;

③ Rigid Polyols brands: Conventional rigid polyols 4110;

④ POP (slabstock) brands: 2045, 2042;

⑤ POP (HR) brands: 3628, 3630, etc.

⑥ Elastomer Polyols brands: 220, 210, etc.

Imports: ① Flexible Slabstock Polyols brands include: 5613, 2025A, 5616, etc.

② POP (slabstock) refers to 42-45% solid content polymeric polyols.

Exports: ① Flexible Slabstock Polyols includes the MW 3000;

② POP (common-grade) refers to 42-45% solid content polymeric polyols;

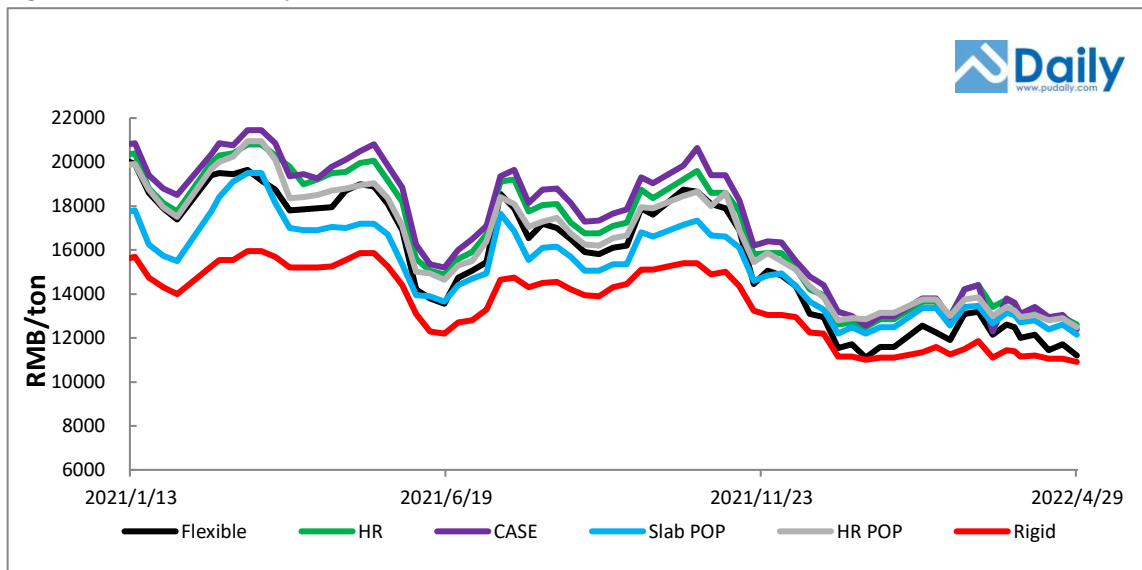
③ HR Polyols: MW 4800-5000, such as 330N;

④ Elastomer Polyols: MW 1000 and MW 2000, such as 210/220.

CNY Cost = USD CIF price *(1+13%)*(1+6.5%)*Exchange Rate+ Import Port Charge (Only available for calculating the costs of China polyether polyols imports.

13%: VAT Rate; 6.5%: Import Duty Rate but Singapore with zero duty.

Figure 6 2021-2022 China Polyols CNY Price Trend



Note: ①CNY refers to E-China, Bulk /DEL;

②USD refers to Drum/CIF China.

2.2.2.3 China Polyether Polyols Facility Dynamics

Table 19 China Polyether Polyols Facility Dynamics

Producer	Plant Location	Capacity (kt/a)	Production Rate
Wanhua Chemical Co., Ltd	Yantai, Shandong	1150	90%
Shandong Longhua Chemical Technology Co., Ltd	Zibo, Shandong	520	60%
Jiahua Chemical Co., Ltd	Binzhou, Shanghai & Fushun	600	60%
Shandong Bluestar Dongda Chemical Industry Co., Ltd	Zibo, Shandong	300	60%
Zibo Dexin Lianbang Industry Chemical Co., Ltd	Zibo, Shandong	330	60%
Jurong Ningwu New Material Development Co., Ltd.	Jurong, Jiangsu	300	50%
CNOOC and Shell Petrochemicals Company Ltd	Huizhou, Guangdong	930	80%
Jiangsu Changhua Polyurethane Co., Ltd	Zhangjiagang, Jiangsu	220	60%

Hebei Yadong Chemical Group Co., Ltd	Shijiazhuang, Hebei	120	60%
Jiangsu Zhongshan Chemical Co., Ltd.	Nanjing, Jiangsu	180	60%
Fangda Jinhua Chemical Technology Co., Ltd	Huludao, Liaoning	170	60%
Nanjing KUMHO GPRO Chemical Co., Ltd	Nanjing, Jiangsu	130	0%
Others		2460	50%
Total capacity		7410	
Average Monthly Production Rate		60%	

2.2.2.4 Import & Export Data

Table 20 China Polyols Im/Export Flow in 2022 (Tons)

Month (HS Code: 39072090)	Import		Export	
	2021	2022	2021	2022
Jan.	44,649	44,197	77,731	108,771
Feb.	45,869	37,317	87,167	102,390
Mar.	58,298	39,613	112,433	121,892
Apr.	44,018		115,105	
May	45,888		101,230	
Jun.	38,277		100,989	
Jul.	54,740		93,186	
Aug.	51,493		90,301	
Sep.	56,306		93,358	
Oct.	42,571		87,417	
Nov.	68,939		89,916	
Dec.	58,082		95,857	
Total	609,130		1,144,690	
Mar. Year on Year	—	-32.05%	—	8.41%
Mar. Month on Month	—	6.15%	—	19.05%

Table 21 China Polyols Exports Top Destinations in 2022 (Tons)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
India	4,874	4,404											
Vietnam	10,295	13,255											
South Korea	4,325	2,645											
Turkey	9,475	8,804											
Pakistan	2,665	3,263											

2.2.2.5 Future Market Forecast

Chinese polyether polyol market is expected to be weak in May. At present, the epidemic situation in China is still severe. Although the resumption of work and production has begun in some areas, but sporadic cases are emerging, and anti-epidemic measures are still in place. The recovery of logistics and industrial chain may take a certain time. Moreover, there is no sign of improvement in end demand due to the lingering epidemic. If the epidemic situation eases, downstream demand is expected to increase, but it still needs to wait. Therefore, Chinese polyether polyol market is expected to be weak at the beginning of May. It is not ruled out that the price may continue to decrease under traders' positive intention to ship goods, and we will focus on the demand trend in mid to late May.

2.3 PU Resin Industry Chain

2.3.1 AA

2.3.1.1 Market Overview

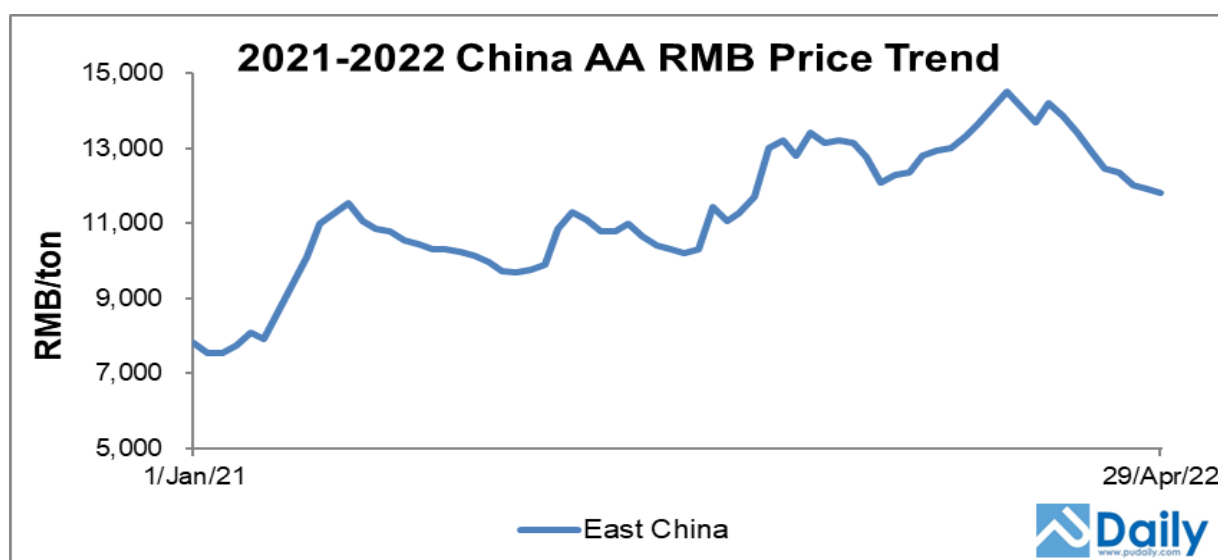
In April, China adipic acid market dropped. The prices of oil and benzene fluctuated, providing unclear guidance for the movement of AA price. With significantly lower industry operating rate, the supply side lent stronger support to AA price. However, demand from downstream manufacturers was sluggish as they kept operating rates low as a result of the impact of COVID-19 pandemic and blocked transport. Specifically, TPU, sole resin and synthetic leather resin manufacturers kept their operating rates low, while PA66 manufacturers kept their rates at about 70%. As market participants adopted a wait-and-see strategy, the manufacturers decreased their offers. On April 29, the prevailing offers in East China stand at CNY 11,700-11,900/ton DEL by bank draft payment.

2.3.1.2 CNY & USD Prices

Table 22 Monthly Adipic Acid CNY and USD Prices Comparison

Types	Unit	Apr. Average Price	Mar. Average Price	Fluctuation	Remarks
China	CNY/ton	12,000-12,252	13,326-13,758	-1,326, -1,506	on bank receipt, DEL.
Exports	USD/ton	1,810	1,925	-115	FOB

Figure 7 2021-2022 China AA CNY Price Trend



2.3.1.3 China AA Facility Dynamics

Table 23 China AA Facility Dynamics

Producer	Plant Location	Capacity (Kt/a)	Production Rate
Shandong Haili Chemical Co., Ltd.	Zibo, Shandong	75*3	One line runs at 80% loads and one line has restarted in late April; the other line is shut down
	Dafeng, Jiangsu	150*2	Shut down for maintenance in early April and the restart time is unsure
Henan Shenma Nylon Chemical Co., Ltd.	Pingdingshan, Henan	150+250+70	Runs regularly

Tangshan Zhonghao Chemical Co., Ltd.	Tangshan, Hebei	75*2	Runs at 90% loads
PetroChina Liaoyang Petrochemical Co., Ltd.	Liaoyang, Liaoning	70*2	Runs regularly and the old line is planned to be shut down for maintenance
Shandong Hualu Chemical Co., Ltd.	Dezhou, Shandong	80*2+200	Runs regularly
Xinjiang Dushanzi Tianli High&Newtech Co., Ltd.	Karamay, Xinjiang	75	Runs at 80% loads
Chongqing Huafor Co., Ltd.	Chongqing	180*3+200*2	Fifth-phase line runs at 50% load; other lines run regularly
Shanxi Yangmei Taihua Industry Co., Ltd.	Yuncheng, Shanxi	70*2	Shut down for maintenance in early April and is planned to be restarted in early May
Shandong Hongding Co., Ltd.	Heze, Shandong	70*2	The restart time is unsure
Total		2,940	62%

Note: The operating conditions of manufacturers are the latest status at the end of the month, and the industry operating rate is the monthly average operating rate.

2.3.1.4 Import & Export Data

Table 24 China AA, its Salts and Esters Import/Export Flow in 2021 and 2022 (Tons)

Month (HS Code: 29171200)	Import		Export	
	2022	2021	2022	2021
Jan.	608	1,030	26,763	32,804
Feb.	423	993	22,512	27,095
Mar.	700	1,590	28,949	41,611
Apr.		1,843		34,490
May		934		36,252
Jun.		1,038		33,947
Jul.		876		35,247
Aug.		930		29,841
Sep.		732		35,854
Oct.		609		33,205
Nov.		1,260		31,709
Dec.		853		26,060
Sum		12,687		398,115
Jan. - Mar. Year on Year	-52.09%		-22.94%	
Mar. Month on Month	65.38%		28.59%	

Table 25 China AA, its Salts and Esters Exports Top Destinations in 2022 (Tons)

	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Total
Turkey	3,625	3,400	4,380										11,405
Singapore	4,180	2,535	3,680										10,395
India	3,314	1,908	4,054										9,276
Taiwan, China	2,610	1,900	2,858										7,368
Korea	2,406	1,568	2,761										6,735

2.3.1.5 Future Market Forecast

The AA market is expected to remain relatively weak in May. The price of feedstock benzene is likely to fluctuate as oil prices do, lending limited support to AA price. Although some AA manufacturers have maintenance plans, demand from buyers may remain weak due to uncertainties over recovery in transport and their operations.

2.3.2 BDO

2.3.2.1 Market Overview

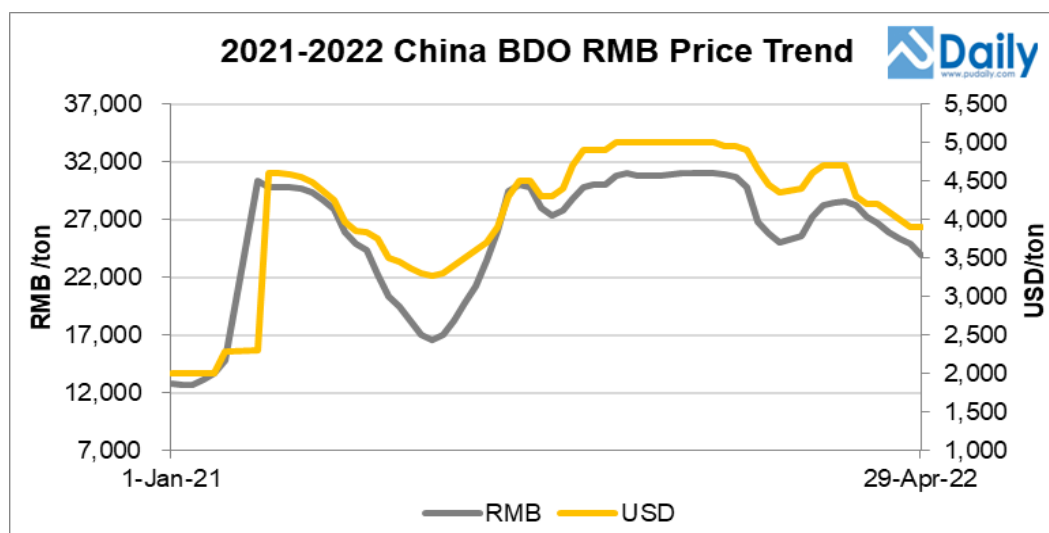
China BDO market declined substantially in April. As multiple BDO manufacturers shut their plants for maintenance or changed catalysts, the industry production load declined continuously, lending relatively strong support to BDO price. As the pandemic affected transportation, demand from buyers was weak. Specifically, spandex and GBL-NMP manufacturers as well as PBT producers lower their production loads, and manufacturers in other industries kept their operating rate low. And they placed small orders only to meet immediate needs. In this context, traders reduced their offers by discussing prices with buyers. On April 29, the prevailing offers in East China stand at CNY 26,500-26,800/ton DEL in bulk by bank draft payment.

2.3.2.2 CNY & USD Prices

Table 26 Monthly BDO CNY and USD Prices Comparison

Types	Unit	Apr. Average Price	Mar. Average Price	Fluctuation	Remarks
China	CNY/ton	25,293-25,600	27,855-28,274	-2,562, -2,674	Bulk/DEL
Exports	USD/ton	3,975	4,420	-445	FOB

Figure 8 2021-2022 China BDO CNY Price Trend



2.3.2.3 China BDO Facility Dynamics

Table 27 China BDO Facility Dynamics

Producer	Plant Location	Capacity (Kt/a)	Production Rate
Xinjiang Markor Chemical Industry Co., Ltd.	Korla, Xinjiang	60+100+100	Runs regularly

Changlian Chemicals (Panjin) Co., Ltd.	Panjin, Liaoning	150	Shut down for maintenance from April 6 for about a month
Xinjiang Tianye Chemicals	Xinjiang	30+60*3	All lines are shut down for maintenance and is planned to be restarted in early May
Shanxi BDO Chemical Co., Ltd.	Weinan, Shanxi	100+30	The 100k-ton line is shut down to replace catalyst from April 26 for about a week; the other line runs regularly
Shanxi Ronghe Chemical Co., Ltd.	Shanxi	60	Runs at 70% loads and is planned to be shut down for maintenance in May
Henan Kaixiang Fine Chemical Co., Ltd.	Yima, Henan	55*2	Runs regularly
Henan Coal Chemical Industry Group	Hebi, Henan	50*2	Runs regularly and is planned to be shut down to replace catalyst in mid-May for about a week
Sinopec	Ningxia	100*2	Runs regularly
Sichuan Tianhua Fubang Chemical Industry Co., Ltd.	Luzhou, Sichuan	25+60	Runs regularly
Dahua Group Dalian Chemical Co., Ltd.	Yizheng, Jiangsu	50	Runs regularly
Chongqing Jianfeng Chemicals	Fuiling, Chongqing	60	Shut down to replace catalyst in late April for about 7-10 days
Fujian Petrochemical Group United Marketing Co.,LTD	Quanzhou, Fujian	40	Shut down to be ready to relocate the plant from the early October 2021
Xinjiang Blue Ridge TunHe Energy Co., Ltd.	Changji, Xinjiang	204	Runs regularly
Inner Mongolia Dongyuan Scien-Tech Co., Ltd.	Inner Mongolia	100	Runs regularly
Xinjiang Guotai Xinhua Mining Co.,Ltd	Changji, Xinjiang	100*2	Runs regularly and is planned to be shut down for maintenance in May
Xinjiang Xinye Energy Chemical Industry Co., Ltd	Xinjiang	60	Shut down for maintenance from April 19 and is planned to be restarted in early June
Han cheng black cat chemical co. LTD	Shanxi	60	Runs regularly and is planned to replace the catalyst in mid-May
Shaanxi Yanchang Petroleum (Group) Oilfield Gas chemical Technology Co. LTD.	Shanxi	100	Runs at 70%-80% loads
Sum (Alkynyl aldehyde method + Allyl alcohol method)		2,179	74%
Nanjing Bluestar New Chemical Materials Co., Ltd.	Nanjing, Jiangsu	55	Closed
Sinopec Yizheng Chemical Fibre Company Limited	Yizheng, Jiangsu	100	Closed
Shanxi Sanwei Group Co., Ltd.	Shanxi	75	Closed
Ningbo Jiangning Chemicals	Ningbo	70	Closed
Zhongjia Huachen Chemicals	Zhejiang	55	Closed
Shandong Jiatai Petroleum & Chemical Co., Ltd.	Dongying, Shandong	13	Closed
Sum (Maleic anhydride method)		268	-
Total		2,447	-

Note: The operating conditions of manufacturers are the latest status at the end of the month, and the industry operating rate is the monthly average operating rate.

2.3.2.4 Import & Export Data

Table 28 China BDO Import/Export Flow in 2021 and 2022 (Tons)

Month (HS Code: 29053990)	Import		Export	
	2022	2021	2022	2021
Jan.	12,363	11,654	11,583	6,628
Feb.	10,663	5,945	5,638	8,552

Mar.	15,886	14,026	7,715	6,225
Apr.		11,240		11,875
May		10,205		11,917
Jun.		12,265		10,004
Jul.		10,189		6,516
Aug.		13,953		6,130
Sep.		12,508		6,947
Oct.		11,804		9,823
Nov.		13,626		8,495
Dec.		15,655		12,594
Sum		143,070		105,707
Jan. - Mar. Year on Year		23.04%		16.50%
Mar. Month on Month		48.97%		36.86%

2.3.2.5 Future Market Forecast

The BDO market is expected to be under consolidation in May. With some BDO plants undergoing maintenance while some restarted, the industry operating rate is expected to remain low in May, thus lending support to BDO price. In May, as lockdowns in many areas of Shanghai are likely to be lifted, transport will be restored, though uncertainties remain. Attention should be paid to the changes in government's prevention and control policies.

2.3.3 PTMEG

2.3.3.1 Market Overview

China PTMEG market consolidated at low level in April. The price of feedstocks BDO fell significantly, lending weaker support to PTMEG price. With great inventory pressure due to weak demand from textile sector and blocked transport amid COVID-19, spandex manufacturers slightly reduced their prices and consumed existing inventories. Demand from non-spandex products manufacturers was also weak as they kept their production loads low. All this led PTMEG manufacturers to slightly reduce their operating rates and discuss prices with buyers for confirmed orders. On April 29, the prevailing offers of PTMEG 1800 for spandex are discussed at CNY 40,000-41,000/ton. The prevailing offers of PTMEG 1000 for non-spandex products are discussed at CNY 43,000-45,000/ton. The prevailing offers for PTMEG 2000 stand at CNY 42,000- 44,000/ton DEL in drum.

2.3.3.2 CNY & USD Prices

Table 29 Monthly PTMEG CNY and USD Prices Comparison

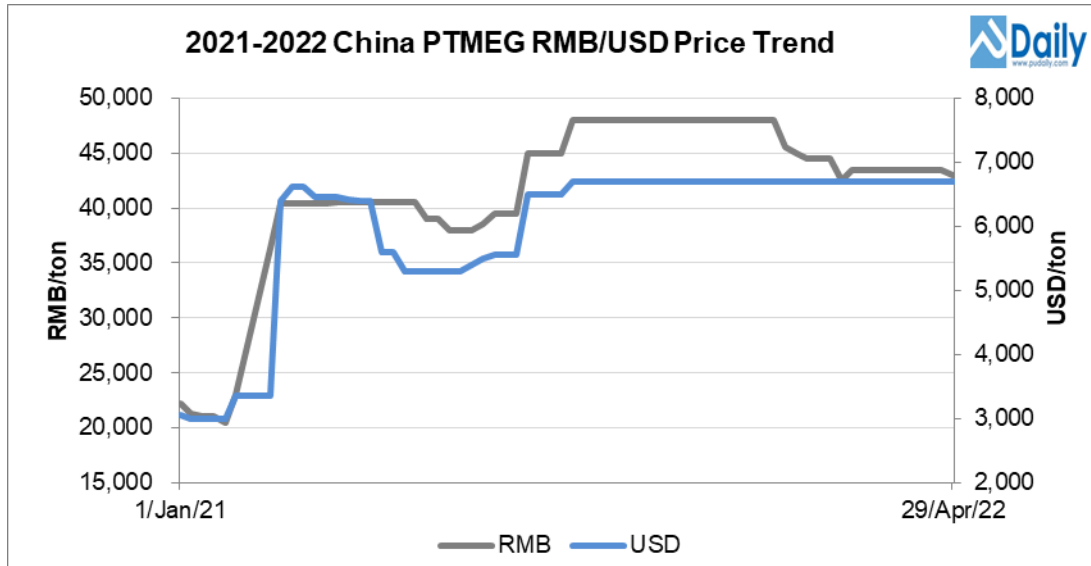
Grade	Types	Unit	Apr. Average Price	Mar. Average Price	Fluctuation	Remarks
1800 mol/g	China	CNY/ton	40,931-41,897	40,935-41,903	-4, -7	Bulk/Ex-factory
	Taiwan Dairen	USD/ton	--	--	--	Bulk/CIF
1000 mol/g	China	CNY/ton	43,931-45,000	44,000-45,000	-69, 0	Drum/Ex-factory
	Mitsubishi	USD/ton	6,700	6,700	0	Drum/CIF
2000 mol/g	China	CNY/ton	42,931-44,000	43,000-44,000	-69, 0	Drum/Ex-factory
	Mitsubishi	USD/ton	6,700	6,700	0	Drum/CIF

Notes: ① CNY Cost=USD CIF price *(1+13%)*(1+3%) *Exchange Rate+ Import Port Charge (Only available for calculating the costs of China PTMEG imports.

17%: VAT rate; 3%: Import duty rate)

② n/c refers to "No Change"

Figure 9 2021-2022 China PTMEG CNY & USD Price Trend



Note: ①CNY refers to E-China, 2000 mol/g Drum/Ex-factory;

②USD refers to Drum/CIF China.

2.3.3.3 China PTMEG Facility Dynamics

Table 30 China PTMEG Facility Dynamics

Producer	Plant Location	Capacity (Kt/a)	Production Rate
Shanghai BASF	Shanghai	110	Runs at full loads
Hyosung Chemical Fiber (Jiaxing) Co., Ltd	Jiaxing, Zhejiang	120	The 50,000-ton unit is planned to be shut down for maintenance from April 17 for about half a month; Other units run regularly
Xiaoxing Spandex (Ningxia) Co., Ltd.	Ningdong, Ningxia	100	Runs at 30%-40% load
Changlian Chemicals (Panjin) Co., Ltd	Panjin, Liaoning	60	Shut down for maintenance from April 8 for about a month
Sichuan Tianhua Fubang Chemical Industry	Luzhou, Sichuan	46	Runs at 80% loads
Chongqing Jianfeng Chemicals	Chongqing	46	Runs regularly
Shanxi BDO Chemical Co., Ltd	Weinan, Shanxi	46	Runs regularly
Sinopec Great Wall Energy and Chemical Co., Ltd.	Ningxia	92	Runs regularly
Hangzhou Sanlong New Materials Co., Ltd	Hangzhou, Zhejiang	55	Runs regularly
Dahua Group Dalian Chemical Co., Ltd	Yizheng, Jiangsu	40	Shut down
Henan Coal Chemical Industry Group	Hebi, Henan	60	One line runs regularly and the other line is shut down
Shanxi Yanchang Petroleum (Group) Oilfield Gas chemical Technology Co. LTD.	Shanxi	46	Runs at 30% loads
Xinjiang Guotai Xinhua Mining Co., Ltd	Xinjiang	60	Runs regularly
Xinjiang Blue Ridge TunHe Energy Co., Ltd.	Changji, Xinjiang	46	Runs regularly
MKMO	Xinjiang	50	Runs at full loads
Total		977	73%

Note: The operating conditions of manufacturers are the latest status at the end of the month, and the industry operating rate is the monthly average operating rate.

2.3.3.4 Import & Export Data

Table 31 China PTMEG Export/Import Flow in 2021 and 2022 (Tons)

Month	Import	Export
-------	--------	--------

(HS Code: 39072910)	2022	2021	2022	2021
Jan.	3,310	3,553	5,979	4,097
Feb.	2,213	4,624	6,710	2,068
Mar.	4,113	5,908	7,825	2,656
Apr.		4,260		3,019
May		3,100		3,051
Jun.		2,543		2,796
Jul.		3,636		3,212
Aug.		4,190		4,120
Sep.		4,998		5,149
Oct.		2,576		4,788
Nov.		4,039		5,497
Dec.		3,105		5,723
Sum		46,534		46,175
Jan. - Mar. Year on Year		-31.60%		132.56%
Mar. Month on Month		85.81%		16.61%

Note: In 2022, the HS Code of PTMEG has changed from 39072010 to 39072910.

Table 32 China PTMEG Imports Top Origins in 2022 (Tons)

	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Total
Taiwan, China	2,749	1,485	3,325										7,560
Korea	547	539	523										1,609
Japan	8	186	258										452

2.3.3.5 Future Market Forecast

It is expected that the PTMEG market will consolidate at low level in May. The price of feedstock BDO is projected to be weak, thus lending little support to PTMEG market. Under great inventory pressure, spandex manufacturers may reduce their prices. As bearish sentiments run rampant, it is expected that the PTMEG market will consolidate at low level next month.

3. Southeast Asia & India PU Market

3.1 TDI

3.1.1 Market Overview

In April, the TDI market in Southeast Asia and India declined. Local market demand was fair in April. With Eid Mubarak holiday approaching in May, the market demand from downstream foam factories was quiet in Malaysia. At the beginning of April, the CIF offers in Southeast Asia were around USD 2,950-3,100/ton and later decreased to USD 2,800-2,900 by end of April. The TDI plants in Korea had overall stable operation in April, while the Mitsui Chemicals TDI plant in Japan supplier experienced some production issues in March and lowered the operation rate in April. The CIF offers in India also decreased by April 29, down by USD 150/ton compared with the CIF offers in the end of March.

3.1.2 Price Trend

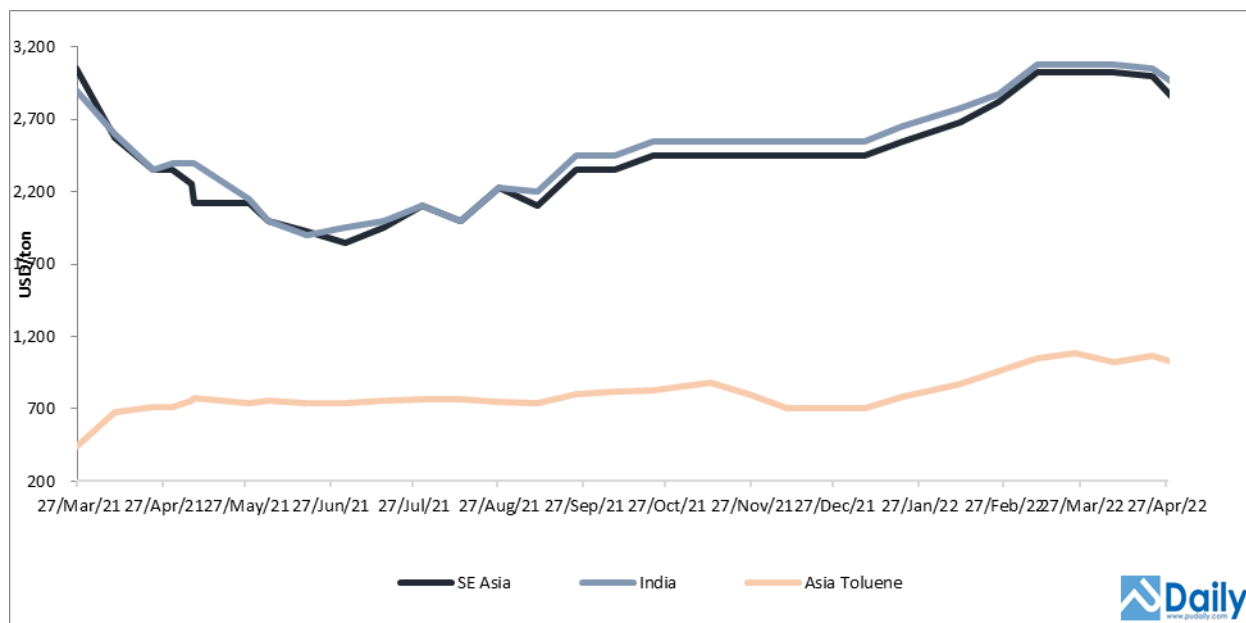
Table 33 Monthly SE Asia & India TDI Prices Comparison

Types	Unit	Apr. Average Price	Mar. Average Price	Fluctuation	Remarks
SE Asia	USD/ton	2,850-3,025	3,000-3,050	-150,-25	Drum/CIF

India	USD/ton	2,950-3,075	3,050-3,100	-100,-25	Drum/CIF
-------	---------	-------------	-------------	----------	----------

Note: covered countries in Southeast Asia include Thailand, Indonesia, Vietnam, Malaysia and Singapore.

Figure 10 2021 - 2022 SE Asia & India TDI Price Trend



3.1.3 Forecast

The TDI market in Southeast Asia and India are expected to be stable in May. On the demand side, market demand would slowly improve with further consumption of inventory depletion. On the supply side, several plants, including Hanwha, Shanghai BASF and Covestro, have scheduled to shut down for maintenance in May. The rising prices of oil and other raw materials also support the market price to maintain a certain level.

3.2 MDI

3.2.1 Market Overview

The Polymeric MDI market in Southeast Asia became weak in April. The overall market consumption was lower in April than in the same period last year. Local downstream demand also grew at a much slower pace. Downstream industries were faced with a strong reduction in consumption due to increased prices of raw materials. These affected sectors included panel, cold chain and automobile industries. In Vietnam, local real estate projects postponed because of high-rise construction materials. By April 29, the mainstream CIF offer prices in Southeast Asia were around USD 2,550-2,600/ton, down by USD 100/ton compared with the CIF offers in the end of March. While the polymeric MDI market in India was steady in April. The CIF offers of polymeric MDI in India stood at USD 2,700 – 2,800/ton by April 29, down by USD 50/ton compared with the CIF offers in the end of March.

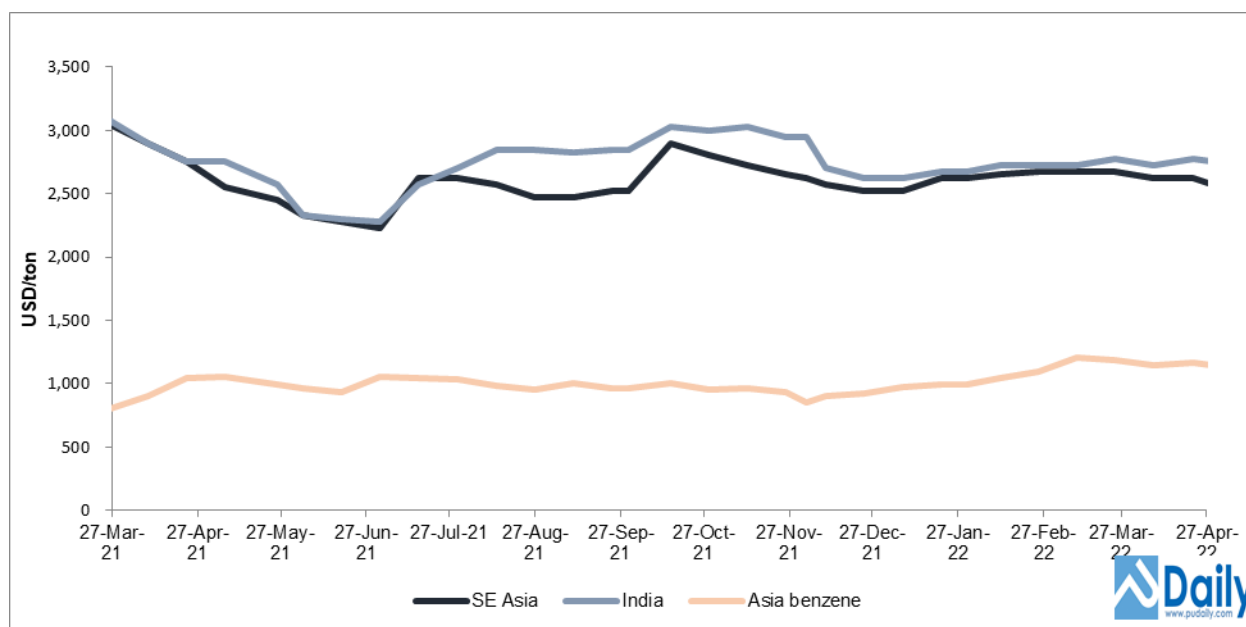
3.2.2 Polymeric MDI Price Trend

Table 34 Monthly SE Asia & India PMDI Prices Comparison

Types	Unit	Apr. Average Price	Mar. Average Price	Fluctuation	Remarks
SE Asia	USD/ton	2,600-2,650	2,650-2,700	-50, -50	Drum/CIF
India	USD/ton	2,725-2,775	2,725-2,775	0, 0	Drum/CIF

Note: covered countries in Southeast Asia include Thailand, Indonesia, Vietnam, Malaysia and Singapore.

Figure 11 2021 - 2022 SE Asia & India Polymeric MDI Price Trend



3.2.3 Forecast

The Polymeric MDI prices in Southeast Asia and India are expected to stay weak in May. On the supply side, goods delivery to Southeast Asia will be negatively impacted by the reduced output from Shanghai factories during epidemic control as well as plant maintenance shutdown in May. On the demand side, market demand from downstream factories was lower than expected in April. Under the influence of rising raw material prices, downstream productions likely make slow consumption of polymeric MDI.

3.3 Polyether Polyols

3.3.1 Market Overview

Southeast Asia (hereinafter referred to as SE Asia) polyols market is stable in reporting period.

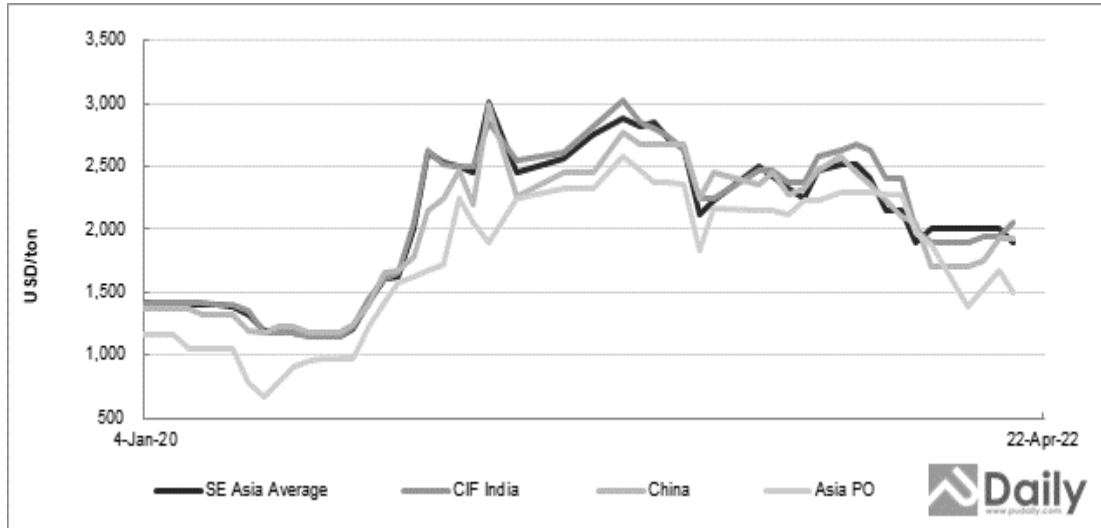
3.3.2 Price Trend

Table 35 Monthly Polyether Polyols Price Comparison

Types	Unit	Apr. Average Price	Mar. Average Price	Fluctuation	Remarks
SE Asia	USD/ton	1,880-1,980	1,900-2,000	-20, -20	Drum/CIF
India	USD/ton	1,900-2,000	1,975-2,050	-75, -50	Drum/CIF
South Korea	USD/ton	2,050-2,150	2,125-2,175	-75, -25	Drum/FOB

Note: Covered countries in Southeast Asia include Thailand, Indonesia, Vietnam, Malaysia and Singapore.

Figure 12 2020-2022 SE Asia & India Polyether Polyols Price Trend



3.3.3 Forecast

The Southeast Asian country's offer to China was used as a benchmark. International oil prices rose early in the week as the shutdown of Libya's largest oil field heightened market concerns about global crude supplies. But international oil prices tumbled as the International Monetary Fund cut its economic growth forecasts and warned of rising inflation, and traders weighed the impact of the Libyan supply disruptions and epidemic prevention and control on demand. The polyether market was under pressure to narrowly adjust upwards, by a short period of replenishment and then quickly turn light, after which there was again negotiation feedback, the overall performance is not satisfactory. The demand side is still affected by the epidemic logistics and start-ups are still limited, downstream enterprises on the mid-term market expectations are still pessimistic bearish mentality, and there is raw material end of the cyclopropyl overhaul device to restore supply increment, polyether market more than short news game temporary stalemate, the main factory shipping pressure still exists, the new single more stable price to promote single running. The control is gradually lifted, but the short-term demand recovery degree of fear is limited, and capacity pressure still exists, the cost of raw materials into the only support. The downstream industry also performed sluggishly, not much willingness to purchase polyether, with single feedback is not ideal. At present, the contradiction between supply and demand is prominent, the industry is becoming more cautious, short-term difficult to boost, the future is expected to PPG range oscillation, focusing on the May Day holiday stocking situation and PO market direction.

4. Polyurethane Products Market Analysis

4.1 Flexible Foam

In April, the rigid PU foam market is lacklustre, raw material TDI and polyether polyol market are weak. Epidemic factors continued to affect, some TDI factory shipments are still slow, while downstream demand continues to be suppressed, the overall support is weak. Since mid-April, although the automobile and related industrial chains affected by the epidemic have begun to promote orderly resumption of work and production, the current effect of boosting raw materials is still poor, and the enthusiasm of factory procurement is far lower than expected. The market still needs a long period of repair and development; the start-up of sponge factories is at a low level, especially in eastern China. TDI middleman shipping mentality continues to make a small profit, the focus of negotiations continues to tilt to the low end, the overall atmosphere of negotiations in the field is light, the actual single follow-up is limited. PO price reduction has little effect, supported by unlimited orders to drive soft foam polyether down one after another, the industry's lack of confidence in the future, May Day holiday will be difficult to boost.

4.2 Rigid Foam

In April, the rigid PU foam market went down weakly. Due to the impact of the epidemic and other factors, the demand from major downstream industries such as home appliances, panels, insulation materials, OCF and reefer containers decreased significantly from the previous month/year on year. A number of thermal insulation projects in northern China have been suspended due to insufficient upstream

raw material supply and epidemic control. The domestic polymeric MDI market in this month weakly fell down. Polymeric MDI suppliers in Shanghai commonly faced the logistics blocked problem, and hard to shipment, so the Shanghai-brand goods in the market were decreased and tightened. So both supply and demand side showed flat and the actual transaction of both polymeric and rigid polyol were less this month.

4.3 PU Resin

In April, China PU resin market for synthetic leather fell dramatically. The prices of feedstocks DMF and BDO fell sharply; and those of pure MDI and AA edged down. Thus the overall cost pressure decreased. The industry operating rate remained low as transport of raw materials and finished products was affected by the COVID-19 pandemic. On the other hand, demand from synthetic leather industry was weak as they placed small orders only to meet immediate needs. Finding it hard to sell goods, synthetic leather resin manufacturers significantly lowered their offers. On April 29, offers for conventional wet-process resins in East China market stand at CNY 14,500-15,000/ton DEL by bank draft payment. And those for dry-process resins stand at CNY 15,200-15,500/ton DEL by bank draft payment.

In April, China sole resin market moved sideways. The prices of feedstocks pure MDI and AA declined; and that of BDO declined substantially. Thus the overall cost pressure decreased on sole resin manufacturers. Due to the impact of COVID-19 and sluggish demand, the industry operating rate remained low and manufacturers found it hard to sell goods. Due to sluggish demand and for seasonal reason, confirmed orders-based trading was thin. As both supply and demand shrank, sole resin market was locked in stalemate. On April 29, the offers for conventional PU resins for outsoles A material in East China market stand at CNY 15,000-17,500/ton DEL by bank draft payment. offers for conventional PU resins for outsoles B material stand at CNY 22,500-26,500/ton DEL by bank draft payment.

5. Downstream Industries

5.1 Upholstered Furniture

In 2022, According to National building materials circulation association, sales amount in ten totaled up CNY107.383 billion throughout the month, an increase of 27.82% month on month and an increase of 38.60% year on year.

Table 36 China BHI Index in 2022

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
BHI Index	105.99	102.97	115.25									
MOM (%)	-17.24	-3.02	12.28									
YOY (%)	21.06	23.00	12.25									

5.2 Automobile

According to statistical analysis from China Association of Automotive Manufacturers (CAAM), In March, automobile production and sales reached 2.241 million and 2.234 million respectively, up 23.4% and 28.4% month-on-month, and down 9.1% and 11.7% year-on-year. The data of the first quarter were also released simultaneously. From January to March, the production and sales of automobiles were 6.484 million and 6.509 million respectively, up 2.0% and 0.2% year on year, 6.8 percentage points and 7.3 percentage points lower than that of January to February. Although the overall slowdown, but the growth rate of new energy vehicles still remains high, in March, the domestic production and sales of new energy vehicles completed 465,000 and 484,000 respectively, year-on-year growth of more than 110%.

China Automobile Association pointed out that in March 2022, the outbreak of COVID-19 in many places in China and the increase of geopolitical instability in the world have affected the production and business activities of enterprises to a certain extent. In addition, the phenomenon of chip shortage is not significantly improved, especially the rapid rise in the price of raw materials for power batteries, which promotes the rise in production costs of enterprises, most enterprises therefore have to increase product sales prices, and ultimately affect the sales of the terminal market.

Table 37 China Auto Outputs & Sales in 2022 (Unit: 1,000 units)

Month	Automobile Total	Passenger Cars	Commercial Cars
-------	------------------	----------------	-----------------

	Output	Sales	Output YOY	Sales YOY	Output	Sales	Output YOY	Sales YOY	Output	Sales	Output YOY	Sales YOY
Jan.	2422	2531	1.40%	0.90%	2077	2186	8.7%	6.7%	345	344	-28.0%	-25.0%
Feb.	1813	1737	20.60%	18.70%	1534	1487	32.00%	27.80%	279	250	-18.30%	-16.60%
Mar.	2241	2234	-9.10%	-11.70%	1881	1864	-0.10%	-0.60%	360	370	-38.00%	-43.50%
Apr.												
May												
June												
July												
Aug												
Sep												
Oct												
Nov												
Dec												
Total	6484	6509	2.00%	0.20%	5499	5545	11.0%	9.0%	985	965	-29.7%	-31.7%

5.3 Home Appliances

Table 38 China Household Refrigerator Outputs in 2021-2022 (1,000 units)

Month	2022	2021	Y-O-Y Growth
Jan.	6,871	8,033	-14.5%
Feb.	5,324	4,600	15.7%
Mar.	7,527	8,333	-9.7%
Apr.		7,199	
May		7,111	
Jun.		6,715	
Jul.		7,002	
Aug.		6,898	
Sep.		7,437	
Oct.		7,554	
Nov.		7,714	
Dec.		7,503	
Jan.~ Mar. Total	19,722	20,966	-5.9%

Table 39 China Household Freezer Outputs in 2021-2022 (1,000 units)

Month	2022	2021	Y-O-Y Growth
Jan.	3,314	4,005	-17.3%
Feb.	2,608	2,288	14.0%
Mar.	3,789	4,212	-10.0%
Apr.		3,476	
May		3,323	
Jun.		3,144	
Jul.		3,072	
Aug.		3,092	
Sep.		3,106	
Oct.		3,125	
Nov.		3,387	
Dec.		3,470	
Jan.~ Mar. Total	9,711	10,505	-7.6%

5.4 Building Insulation

From January to March 2022, China's investment in real estate development reached 2.776.5 trillion yuan, up 0.7% year on year. Of this amount, investment in residential buildings is 2.076.1 trillion yuan, up 0.7%.

From January to March, the construction area of real estate development enterprises was 8,062.59 million square meters, up 1.0% year on year. Of this, residential construction area was 5.690.45 million square meters, up 1.1 percent. New housing construction started on 298.38 million square meters, down 17.5 percent. Among them, the area of newly started housing was 215.58 million square meters, down 20.3 percent. The completed housing area was 16.929 million square meters, down 11.5 percent. Among them, the completed residential area was 123.23 million square meters, down 11.3 percent.

From January to March, the sales area of commercial housing was 310.46 million square meters, down 13.8% year on year. Among them, residential sales area fell 18.6 percent. Commercial housing sales reached 2,965.5 billion yuan, down 22.7%; Residential sales fell 25.6 percent.

5.5 Light Leather

According to National Bureau of Statistics, China light leather output in December was 53.0 square kilometers, down 11.2% year-on-year. The output for the January-December period amounted to 613.4 square kilometers, up 4.6% year-on-year. East China, North China and Central China are the major regions producing light leather, accounted for 89.9% of the national output during this period. Among them, East China produced the highest output, accounting for 41.2% of the national output. It is followed by North China and Central China, accounting for 33.5% and 15.2%, respectively.

Table 40 China Light Leather Outputs in 2021 (Unit: square kilometers)

	Light Leather Outputs	YOY
Jan. – Feb.	72.4	19.8%
Mar.	74.3	25.0%
Apr.	49.6	-0.3%
May	44.3	3.0%
Jun.	58.3	-5.2%
Jul.	50.8	-6.9%
Aug.	51.3	0.8%
Sep.	55.0	-1.6%
Oct.	51.1	-1.3%
Nov.	53.3	-6.2%
Dec.	53.0	-11.2%
Total	613.4	4.6%

5.6 Footwear

According to National Bureau of Statistics, the output of leather shoes in China in December was 330 million pairs, up 0.5% year-on-year. The output of leather shoes in China for the January-December period reached 3,600 million pairs, an increase of 3.1% year-on-year. The production of leather shoes is concentrated in East China, which accounted for 78.5% of the national output for the January-December period. In East China, Fujian Province produced the largest output, accounting for 57.7% of the national output. It is followed by Zhejiang Province, accounting for 16.4% of the national output.

Table 41 China Leather Shoes and Boots Outputs in 2021 (Unit: 100 million pairs)

	Leather Shoes and Boots Outputs	YOY
Jan. – Feb.	4.9	2.1%
Mar.	3.5	17.4%

Apr.	3.0	1.9%
May	3.0	5.4%
Jun.	3.2	2.9%
Jul.	2.9	-0.5%
Aug.	2.9	-1.1%
Sep.	3.1	1.6%
Oct.	3.1	3.9%
Nov.	3.1	-0.1%
Dec.	3.3	0.5%
Total	36.0	3.1%

5.7 Coatings

The national paint output in 2020 was 24.591 million tons, an increase of 2.6 percent over the same period last year. Operating income was 305.434 billion yuan, down 2.8% from the same period last year, while total profits totaled 24.597 billion yuan, up 5.5% from the same period last year. At the beginning of the 13th five-year Plan, the growth rate of the main business income of enterprises in the coating industry was generally high; in the middle of the 13th five-year Plan, facing the pressure of environmental protection, macro-control, market orientation and other factors, the growth rate of some enterprises entered a turning point; in the later period of the 13th five-year Plan, the overall growth rate is stable, and the market pattern is relatively stable.

About Suntower Consulting Limited

Suntower Consulting Limited professionalizes itself in polyurethane market analysis as a consulting organization. Comprised of an experienced research team, it focuses on studies of the PU industry chain. Through close and constant interaction with industry insiders, the team is dedicated to provide customers with quick, precise and useful market information.

PUdaily.com and Chem366.com, under the operation of Suntower, are two website platforms targeting respectively overseas and Chinese clients. Up to now, PUdaily now covers over 139 countries across the world.

© PUDaily, 2020. All rights reserved.

PUdaily makes no warranty of any kind with regard to this material, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. PUDaily shall not be liable for errors contained herein or for incidental or consequential damages in connection with the use of this material. This document contains proprietary information, which is protected by copyright. No part of this document may be photocopied, reproduced, or translated into another language without the prior written consent of PUDaily.

If you have any question, please contact us at:

Tel: 0086-21- 61250980

E-mail: info@pudaily.com

Fax: 0086-21-61159277