

Global Nylon Fibers & Feedstocks

Weekly Update

03 March 2017 | Issue 312

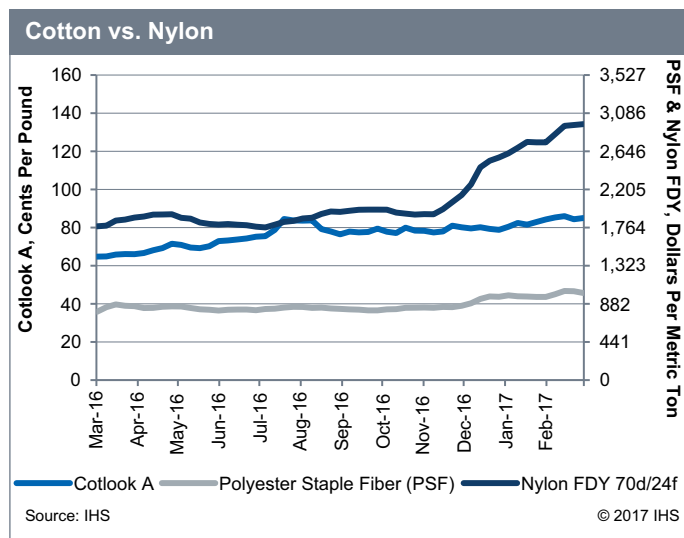
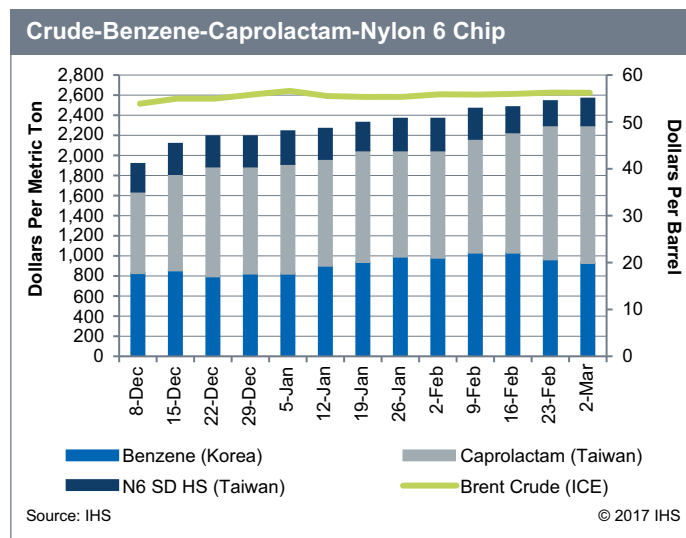
ihs.com/chemical

| Contract | | | | | | |
|---|---------------------------|----------|---------|---------|---------|----------------|
| Product | Region | Currency | Jan '17 | Feb '17 | Mar '17 | Price Pressure |
| Benzene | Korea | \$/Ton | 944 | 1,016 | | ↓ |
| Caprolactam | Taiwan | \$/Ton | 2,015.0 | 2,177.5 | 2,450 | ↗ |
| Adipic Acid | China Domestic (Shandong) | RMB/Ton | 11,500 | 12,200 | 12,800 | ↗ |
| Nomination – lowest of available quotes | | | | | | |

Caprolactam settled contract price is an average of the highest and lowest contracts for the month

| Spot | | | | | | | |
|----------------------------------|--------|----------|----------|---------------------------------|-------------------------------|----------------------|-------------------|
| Product | Region | Incoterm | Currency | February '17 Monthly Average | March '17 Rolling Average* | 2 Mar '17 Average | Price Pressure |
| Benzene | Korea | FOB | \$/Ton | 1,007.98 | 913.75 | 939.00 | ↘ |
| Caprolactam | Taiwan | CFR | \$/Ton | 2,180 | 2,305 | 2,305 | ↘ |
| Caprolactam | China | CFR | \$/Ton | 2,196 | 2,310 | 2,310 | ↘ |
| Adipic Acid | Asia | CFR | \$/Ton | 1,569 | 1,690 | 1,690 | ↗ |
| Adipic Acid | China | DEL | RMB/Ton | 11,763 | 12,400 | 12,400 | ↗ |
| Nylon 6 Chip, Semi-dull, HS | China | CFR | \$/Ton | 2,473 | 2,575 | 2,575 | ↘ |
| Nylon 6 FDY 70d/24f | China | DEL | RMB/Ton | 24,225 | 25,050 | 25,050 | ↔ |
| Nylon 6 Chip, Semi-dull, General | China | DEL | RMB/Ton | 20,288 | 20,500 | 20,500 | ↘ |
| Nylon 6 POY 86d/24f | China | DEL | RMB/Ton | 22,775 | 23,500 | 23,500 | ↔ |
| Nylon 6 DTY 70d/24f | China | DEL | RMB/Ton | 25,538 | 26,500 | 26,500 | ↔ |
| Nylon 6,6 Fiber Chip | China | DEL | RMB/Ton | 23,750 | 24,250 | 24,250 | ↗ |

*Rolling Average - Average of weekly prices posted to date in the current month



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Feedstocks

Energy

Crude oil prices continued to trade in a narrow range as rising crude oil inventory and rig counts in the US countered ongoing strong compliance from the OPEC members meeting the agreed production cut. Despite a respectable rise in refinery throughput in the US following completion of some refinery turnarounds, a large drop in exports combined with increasing import volumes pushed net imports significantly higher resulting in rise in US crude inventory in the week ended February 24th to record 520 million barrels. OPEC production adherence has been very high and Middle East sour grades compose most of that reduction. Not surprisingly key marker crude Dubai has strengthened and led to narrower spreads vs. Dated Brent and even WTI making Atlantic basin crudes more attractive to Asian refiners. In the meantime non-OPEC production cuts likely accomplished a little less than one half of the goal (558,000 b/d) and it is not yet clear if this will improve.

Benzene

- The overvalued benzene prices fell for two consecutive weeks in line with the declines in styrene prices. The weekly average benzene price fell by \$36 per metric ton (mt) from last week to around \$739 per mt FOB South Korea.
- Driven by the persistently poor buying interest by Chinese consumers, coupled with the bearish base petrochemical market cues, especially the tumbling styrene prices, the Chinese domestic benzene markets continued to trend down in the past reporting week. The Chinese benzene price fell by RMB375 per mt (\$47) from last week to RMB8,210 per mt, or import equivalent of \$1,000 per mt. The Chinese benzene price was \$61 per mt higher than the international market price; the arbitrage window for shipping Asian benzene to China remained open.
- The US benzene price fell at a slower pace than the Asian price, and the weekly average US benzene price became higher than the Asian price this week. However, Asian benzene players continue to focus on the Chinese market due to superior netback prices to China compared to the United States.
- The naphtha prices fell by 2% from last week despite of stable Brent crude prices. Hence, the price spread between benzene and naphtha fell by \$30 per mt from last week to \$435 per mt. Despite the drop in benzene prices, the benzene margins remained high given the soft naphtha prices.
- Regarding operations, large-scale spring benzene plant turnarounds have commenced now, there will be several reformer and naphtha cracker turnarounds in March, expecting to tighten the benzene supply. In the meantime, there will be heavy turnarounds for downstream styrene and phenol units; therefore the benzene balance is not expected to see a major change in March.

Short-Term Forecast

- Benzene prices are expected to be under pressure due to a reduction in demand, stemming from heavy styrene and phenol turnarounds.

Caprolactam

Asia

- This week, there was an initial settlement reached between a European producer and a Taiwanese buyer at \$2,300 per mt for the March Asian contract price, representing an increase of \$150 per mt from its February settled price. However, no consensus has been achieved among Japanese producers so far with only one available offer at \$2,450 per mt.
- Despite the weakening Chinese domestic market, the Asian caprolactam spot market continued to hold up quite well amid tight spot availability and robust buying interest. We observed some deals concluded at \$2,300-2,310 per mt this week.

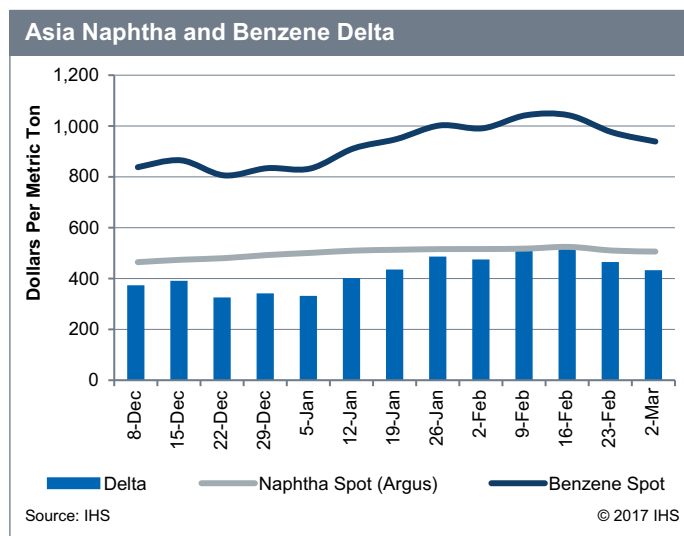
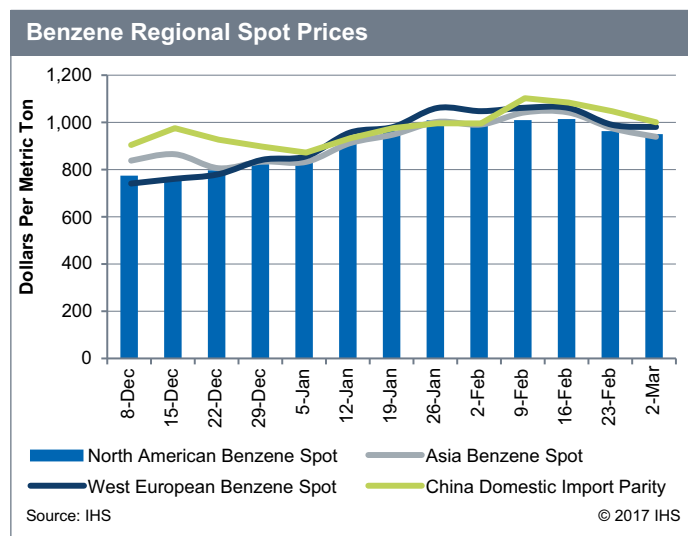
- There has been no meaningful change on the supply side. Supply has decreased from last week as one producer in Thailand started a one-month scheduled turnaround at the end of February. However, all other producers in Asia have maintained optimum production with no known outages reported.

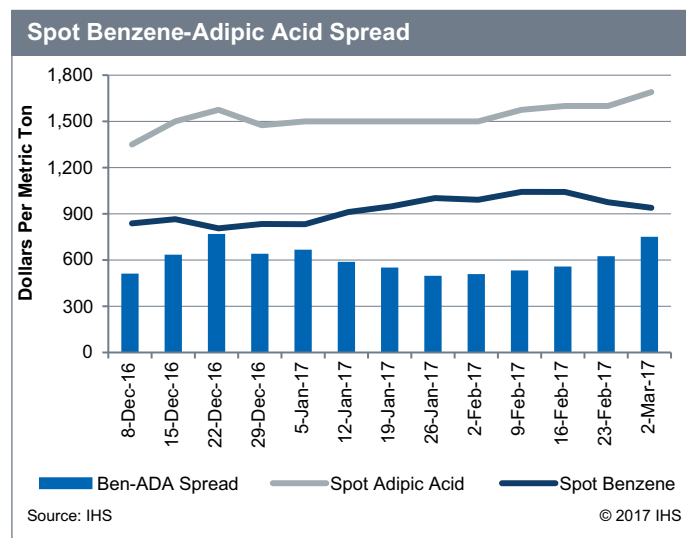
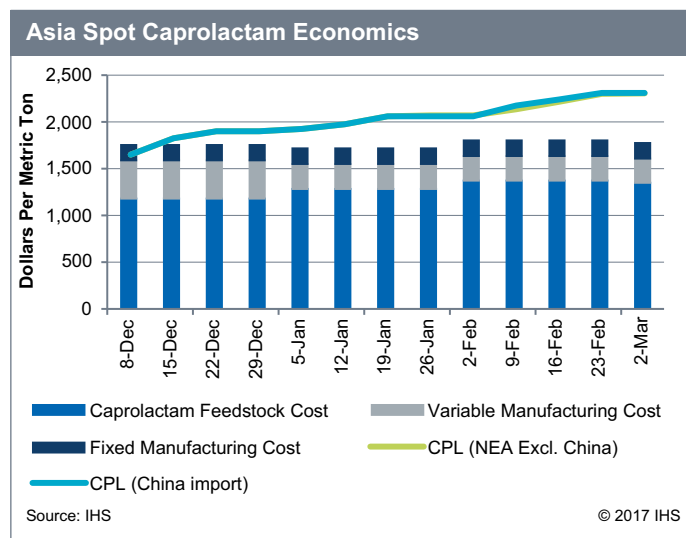
China

- In the domestic contract market, low inventory pressure has allowed Sinopec to increase its contract list price for March to RMB20,000 (\$2,272) per mt. This represents an increase of RMB550 (\$63) per mt from its February settled price and RMB200 (\$23) per mt from its previous list price.
- The RMB spot market has reversed the upward trend seen in the past three months as buyers seem to be reacting cautiously to a situation in which the market balance has started to loosen and feedstocks are lending no support. Some eagerness to sell has weighed down the market, but the higher contract nomination has prevented any significant price drops so far. Throughout the week, prices declined by RM200-300 per mt to RMB19,400-19,500 per mt (six months credit, delivered).
- The import market has appeared relatively stable compared to the Chinese domestic market. We continued to see some inquiries this week, but sellers seemed to be in no hurry to sell off with prices assessed flat at \$2,300-2,320 per mt notionally.
- The previous tightness in China has eased as some capacity that was down earlier has restarted in view of good margins. All operational facilities are currently running with no known planned or unplanned production losses. DNCC has gradually ramped up its operating rates to 80-85% at its 400,000 mt per year capacity as its feedstock supply has improved after Sinopec Nanjing's cyclohexanone line resumed production after encountering unexpected trouble.

Short-Term Forecast

- Although inventory across the board does not appear high, the sluggish new orders have resulted in some anxiety on the sellers' side. This combined with the softer feedstock benzene market will continue to weigh down the Chinese caprolactam market in the short term.





Adipic Acid

Asia

- In the Chinese contract market, Shandong Haili has settled its contract prices for February at RMB12,200 per mt, which is an increase of RMB700 per mt from January's settlement. The market contract list price was posted at RMB12,800 per mt.
- Demand continued to see some improvement this week with large downstream PU plants running at 80-90% while small and medium-size producers were running at 50-70%. This combined with supply restrictions continued to underpin the domestic adipic acid market, with prices increasing to RMB12,300-12,500 per mt in East China, up RMB200-300 per mt from last week.
- The import market remains fairly tight and producers have continued to focus on executing previous orders, with no extra prompt cargoes to sell off at this point. This has helped the adipic acid market swim against the tide of weak feedstocks. As a result, prices for Chinese-origin materials remained firm this week at \$1,650-1,700 per mt notionally while offers for Japanese and South Korean origins surged higher to \$1,700-1,750 per mt for March shipments.

Short-Term Forecast

- Although benzene prices have seen a significant downward correction, a serious supply shortage combined with strong seasonal demand will still allow adipic acid producers to raise prices further in March.

Nylon

Nylon Chip (Fiber Grade)

Asia

- There was still no enthusiastic buying observed this week in the Asian chip market. This was unsurprising as most buyers had stocked up during the previous strong buying and are currently adopting a wait-and-see stance because they perceive that prices may have peaked.
- Although visible trades were elusive during the week as buyers showed strong resistance given the widened price gap between the Chinese domestic and import markets, buyers maintained firm positions and targeted prices at \$2,600 per mt for high-speed spinning nylon 6 semi-dull chip. Prices are currently assessed at \$2,570-2,580 per mt based on the bids and offers.
- In the nylon 6,6 market, the strength in the feedstock market on the back of a serious supply shortage continued to boost nylon 6,6 prices, which increased to \$2,700-2,800 per mt in Asia and RMB24,000-24,500 per mt in China.

China

- In China, consumers continued to show little interest in stocking up this week in a weakening feedstock market, with new orders much lower than production. As a result, chip producers were not able to achieve balanced production–sales ratios this week and inventory has gradually accumulated to 10-14 days.
- This week, movement in Chinese chip prices was mixed as we saw aggressive pricing behavior in the general grade chip market, with prices decreasing by RMB500 per mt to RMB20,200-20,800 per mt. High-speed spinning chip remained relatively firm at RMB21,000-21,700 per mt on the back of firm caprolactam contract nominations.
- Supply has increased slightly as some chip producers have been able to increase production in line with the improved caprolactam supply. Demand in terms of physical consumption has showed no meaningful change with textile filament operating rates have stabilized at around 75%.

Short-Term Forecast

- If there is no sign of a slowdown in the feedstock benzene price decline, chip producers in China may scramble to cut prices in order to attract business given the increased selling pressure. However, tight chip availability may keep import prices firm in the short term.

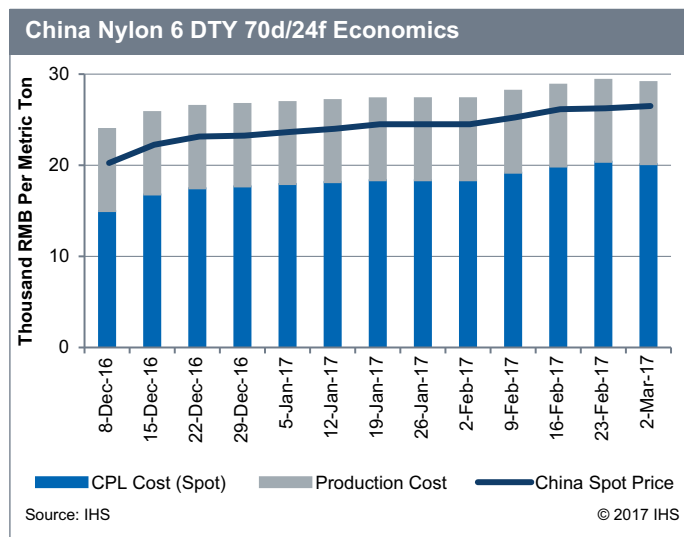
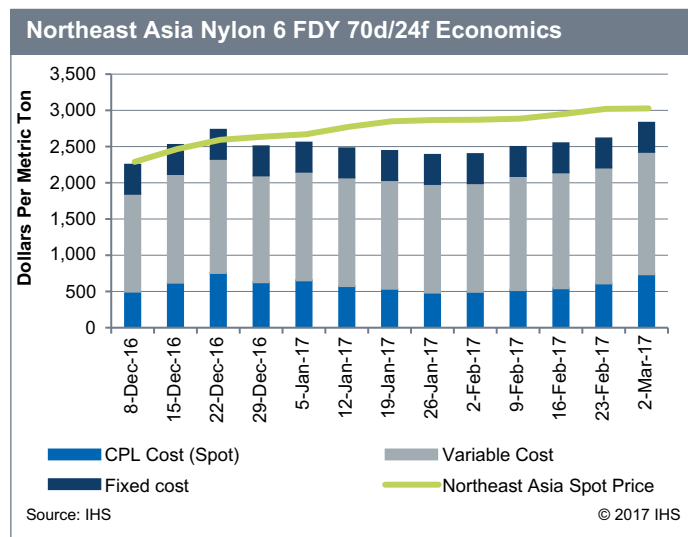
Nylon Filament

Asia

- It seems that the recent price weakness in the upstream market is being passed along to downstream industries. The strong buying in the fabric market seen over the past two weeks has tailed off. However, textile filament producers have still been able to maintain balanced sales-production ratios thanks to strong pre-buying, with inventory remaining at 20-25 days at this point.
- In Taiwan, the textile filament market has lost upward momentum in view of negative development in the upstream market. However, no decline in prices was observed this week given the low sales pressure, with prices for FDY 70d/24f (semi-dull) leveling off at TWD93 per kg.
- As the textile filament market lagged the previous increments in upstream prices, it is necessary for textile filament producers to push prices higher even though the feedstock market has showed signs of weakness. During the week, prices increased to RMB24,800-25,300 per mt for FDY 70d/24f and RMB26,000-27,000 per mt for DTY 70d/24f, while POY 86d/24f remained unchanged at RMB23,000-24,000 per mt.

Short-Term Forecast

- The signs of feedstock weakness are putting downward pressure on the textile filament market. However, the textile filament market lagged the previous increments in upstream prices, which means it may not immediately follow the feedstock decreases.



Spot Price Table

| | | | 9-Feb-17 | | 16-Feb-17 | | 23-Feb-17 | | 2-Mar-17 | |
|----------------------------|-----------------|------------|----------|----------|-----------|----------|-----------|--------|----------|--------|
| Product | Region of Sales | Unit Price | Low | High | Low | High | Low | High | Low | High |
| Nylon Raw Materials | | | | | | | | | | |
| Crude | ICE Brent | \$/Barrel | 55.26 | 56.40 | 55.44 | 56.53 | 55.74 | 56.78 | 55.77 | 56.66 |
| Benzene | United States | \$/Ton | 1,007.26 | 1,012.05 | 1,012.35 | 1,015.94 | 954.70 | 971.34 | 944.55 | 955.93 |
| Benzene | Europe | \$/Ton | 1,054.00 | 1,070.00 | 1,054.80 | 1,067.40 | 986.00 | 993.00 | 976.00 | 985.50 |
| Benzene | Asia | \$/Ton | 1,039.40 | 1,045.40 | 1,039.40 | 1,044.60 | 972.20 | 978.00 | 936.00 | 942.00 |
| Phenol | NE Asia | \$/Ton | 1,100 | 1,160 | 1,100 | 1,150 | 1,090 | 1,140 | 1,070 | 1,120 |
| Caprolactam (1,4) | Taiwan | \$/Ton | 2,120 | 2,150 | 2,160 | 2,270 | 2,300 | 2,300 | 2,300 | 2,310 |
| Caprolactam (1,5) | China | \$/Ton | 2,150 | 2,200 | 2,210 | 2,270 | 2,300 | 2,320 | 2,300 | 2,320 |
| Caprolactam-Domestic (1,6) | China | RMB/Ton | 18,300 | 18,800 | 18,900 | 19,500 | 19,600 | 19,800 | 19,400 | 19,500 |
| Adipic Acid (1,6) | China | RMB/Ton | 11,800 | 12,000 | 11,800 | 12,000 | 12,000 | 12,300 | 12,300 | 12,500 |
| Adipic Acid (1,4) | Asia | \$/Ton | 1,550 | 1,600 | 1,550 | 1,650 | 1,550 | 1,650 | 1,680 | 1,700 |
| Nylon Fiber Chips | | | | | | | | | | |
| N6 SD HS (1,5) | Taiwan | \$/Ton | 2,450 | 2,500 | 2,480 | 2,500 | 2,550 | 2,550 | 2,570 | 2,580 |
| N6 SD HS (1,6) | China | RMB/Ton | 19,700 | 20,700 | 20,700 | 21,700 | 21,000 | 21,700 | 21,000 | 21,700 |
| N6 SD Gen (1,6) | China | RMB/Ton | 19,700 | 20,500 | 20,500 | 21,200 | 20,700 | 21,300 | 20,200 | 20,800 |
| N66 Fiber Chip (1,6) | China | RMB/Ton | 24,000 | 24,500 | 24,000 | 24,500 | 24,000 | 24,500 | 24,000 | 24,500 |
| N66 Fiber Chip (1,4) | Asia | \$/Ton | 2,550 | 2,600 | 2,600 | 2,650 | 2,600 | 2,650 | 2,700 | 2,800 |
| Nylon Fibers | | | | | | | | | | |
| N6 FDY 70d/24f (1,6) | China | RMB/Ton | 23,500 | 24,500 | 24,500 | 25,000 | 24,500 | 25,300 | 24,800 | 25,300 |
| N6 FDY 70d/24f (1) | Taiwan | NT\$/kg | 89.0 | 90.0 | 91.0 | 91.0 | 93.0 | 93.0 | 93.0 | 93.0 |
| N6 FDY 40d/12f (2) | Asia | \$/Ton | 3,170 | 3,200 | 3,250 | 3,250 | 3,320 | 3,320 | 3,330 | 3,330 |
| N6 POY 86d/24f | China | RMB/Ton | 22,000 | 23,000 | 23,000 | 24,000 | 23,000 | 24,000 | 23,000 | 24,000 |
| N6 DTY 70d/24f (1,6) | China | RMB/Ton | 24,500 | 26,000 | 25,300 | 27,000 | 25,500 | 27,000 | 26,000 | 27,000 |
| N66 DTY 70d/68f (1,6) | China | RMB/Ton | 33,000 | 33,500 | 33,000 | 33,500 | 33,000 | 33,500 | 33,000 | 33,500 |

Contract Price Table

| Product | Benzene | | CPL (1,4) | | CPL (1, 3) | | CPL (1,5) | | Adipic Acid (1,5) | |
|-------------|--------------|-----------------|-----------------|-------|----------------|-------|-----------------|---------|-------------------|---------|
| | USA (\$/Ton) | Europe (\$/Ton) | Taiwan (\$/Ton) | | Europe (€/Ton) | | China (RMB/Ton) | | China (RMB/Ton) | |
| | Settled | Settled | Low | High | Low | High | Nom. | Settled | Nom. | Settled |
| January-17 | 811 | 842 | 1,980 | 2,050 | 2,063 | 2,123 | 18,300 | 17,800 | 11,800 | 11,500 |
| February-17 | 997 | 1,045 | 2,085 | 2,270 | 2,330 | 2,390 | 19,800 | 19,450 | 12,200 | 12,200 |
| March-17 | 676 | 992 | | | | | 20,000 | | 12,800 | |

Pricing Notes

All prices are per metric ton unless indicate otherwise.

All prices are FOB unless notes indicated otherwise.

Price range covers from the day following previous report through this report's date.

(1) Delivered or minimum freight allowed (2) FOB (3) Benchmark Price (4) 30 days financial term (5) 90 days financial term (6) Cash Basis

Rates

| | |
|----------------------|-------------|
| China Interest Rates | 4.35% |
| China Exchange Rate | 6.89 RMB/\$ |
| Taiwan Exchange Rate | 30.73 NT\$/ |
| Euro Exchange Rate | 0.95 €/ |



WPC2017

32ND ANNUAL WORLD PETROCHEMICAL CONFERENCE

March 20-24, 2017 | Marriott Marquis-Houston | Houston, Texas

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- 4 breakout tracks to drill deeper into key industry sectors
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- 3 special programs
 - Latin American Petrochemical Summit
 - Technology Seminar
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