

AMBITIOUS PRICE INCREASE INTENTIONS - EXPECTED WEAK DEMAND

WEEK 09, 03. 03. 2024

GENERAL OVERVIEW

The prices of "commodity" polymers were affected by the following factors last week:

- **BRENT oil price** (01.03.2024) **83.56** USD/barrel, <u>slightly rising prices compared to the end of the previous week</u>
- **NAPHTHA** European; (01.03.2024) **687.86** USD/t, <u>rising prices compared to the end of the previous week,</u>
- March contract monomer prices:
- Ethylene (C2) contract price at the time of writing this report is not yet known
- o Propylene (C3) contract price +35 EUR/t (1,100 EUR/t),
- Styrene monomer (SM) contract price <u>+222 EUR/t</u> (1,777 EUR/t),
- **Dutch TTF Gas Futures** (01.03.2024) **25.550** EUR/Mwh, decreasing prices compared to the end of the previous week,
- EUR/USD (01.03.2024): 1.0835 EURO stagnant compared to the previous week,
- Polymer capacity news
- Persistent production problems
- **Karpatneftekhim** (Kalush, unplanned shutdown, HDPE 110 kt/year capacity)
- Entering capacities:
- After the trial production, the PP factory of **Grupa Azoty Polyolefins** with a capacity of 400 kt/year in Police (Poland) was restarted. Grupa Azoty Polyolefins plans to reach 70% of nominal capacity in the first quarter of 2024. Then, by the end of the third quarter, it will reach the maximum capacity planned for the entire new factory complex. Two homopolymer grades (MFR 3 and 3.5) are now regularly available.
- o Ongoing maintenance/outages/malfunctions:
- MOL Group Slovnaft unplanned shutdown at the LDPE-4 plant (220 kt/year LDPE capacity), the shutdown is expected to last 7-9 weeks. Due to the shutdown, the capacity of both the Bratislava Steam-cracker and the PP plant was reduced.
- **Rompetrol** is still standing due to monomer supply problems at the LDPE plant (LDPE capacity of 60 kt/year), a restart is only expected if market prices ensure profitable operation from purchased ethylene.
- **MOL Group** production problems at the LDPE plant of MOL Petrochemicals in Tiszaújváros (65 kt/year capacity).
- **MOL Group** production problems at MOL Petrochemicals HDPE plant in Tiszaújváros, selective FM for certain grades.
- **MOL Group** production problems at the PP(4) plant of MOL Petrochemicals in Tiszaújváros (180 kt/year capacity), cracking problems are in the background.
- o Expected maintenance/outages:



- **Orlen-Unipetrol** planned shutdown in Litvínov in April 2024 (PP capacity 280 kt/year), the expected duration of maintenance is 18-20 days.
- **Orlen-Unipetrol** planned shutdown in Litvínov from April 8, 2024 (270 kt/year HDPE capacity), the expected duration of maintenance is 30 days.
- Due to Rompetrol refinery maintenance, PP production in Navodari will stop between March 10 and April 30, 2024 (90 kt/year PP capacity affected)
- Planned shutdown at Orlen in May, in Plock, (100 kt/year LDPE capacity) planned duration is 3 weeks.
- **HIP-Petrohemija** planned maintenance in Pancevo between March 11 and April 25, 2024 (60 kt/year **LDPE** and 90 kt/year **HDPE** capacity affected)

Despite the fact that the contract price of ethylene monomer has not yet been established, the manufacturers have already made clear the March price increase for both polyethylene and polypropylene. In the case of polyethylene, they usually talk about a price increase of around 50 euros, while in the case of polypropilene the price increase intentions are in many cases three digits. In the case of polystyrenes, the 222 euro SM contract price increase will induce a polystyrene price increase of a similar magnitude. Intentions to raise prices are supported by the tight supply of polyolefin and polystyrene. However, plastic converters not only have to deal with tight supply, but also weak demand, and with the fact that they managed to pass on the price increases to end users only partially or not at all.

That is why most converters will oppose further price increases, most of them have enough polymer stocks until the end of March. In fact, we have heard of quite a few plastic converters who can even operate until the end of April without purchasing polymer. Consequently, the first 1-2 weeks of March will probably be all about waiting and finding a cheaper purchasing option. Those who have an order and do not have enough feedstock for it will mostly buy. A minor recovery in demand is expected in the second half of March, however, due to the Easter holidays and vacations, this March will be shorter and weaker than usual. The big dilemma for polymer manufacturers will be whether they should cut prices in the second half of March due to expected weak demand? There was already an example of this in the 7th-8th week, when after the sharp price increases in February, after the 20th, the polymer producers were already more flexible in their price negotiations. If the price reduction does not begin at the end of March, the beginning of April, it is likely that polyolefin prices will remain at a high level until May. In this case, small and medium-sized converters will only be able to avoid price increases if the large multinational plastic converters also start raising prices. That won't happen before May. This also means that the converters will not start serious purchases until then, and demand will not really pick up until then.

The increase in the price of styrene monomer was induced by the increase in European benzene prices and the SM shortage. The majority of polystyrene producers ordered order stops last week, despite the fact that they still had stocks that could be sold. There was no real demand either. The significant polystyrene price increase expected to exceed €200 in March is expected to reduce demand even more.

POLYETHYLENE GRADES

LDPE prices were in a range of 1,300-1,450 €/t in the last week of December. Few transactions took place in the past week, despite the fact that everyone was aware of the intentions of the LDPE producers to raise



prices. However, due to weak demand and polymer inventories replenished in February, converters were in no rush to buy. According to preliminary news, polymer manufacturers are preparing for an average price increase of 50 euros, in some cases a three-digit price increase in March. We expect the March prices to be announced in the coming week to be in a wide price range of €1,350-1,500/t. However, for plastic converters, prices were already high in February, so we do not expect strong demand in the week ahead. Most will wait until the final March prices are established. Most people believe that the price will drop in April.

The following table shows the typical prices of the last week in Central Europe, €/t (full truckload 20-22.5 t):

| | TYPICAL polymer price ranges in the last week of JANUARY 2023 | TYPICAL polymer price bands in the fourth week of FEBRUARY 2024 | TYPICAL polymer price bands in the last week of FEBRUARY 2024 | Price band change (last week of February - last week of January) | EXPECTED polymer price ranges in the first week of MARCH 2024 |
|-----------|--|--|--|---|---|
| LDPE Film | 1120-1300 | 1310-1450 | 1310-1450 | 190/150 | 1350-1500 |
| LDPE GP | 1120-1280 | 1300-1450 | 1300-1450 | 180/170 | 1350-1500 |

In the last week of February, the entire price range in the MFI 0.6-1 transparent/translucent segment was €800-1,160/t. The price range has widened compared to the previous week, the average prices have not changed. For the time being, high virgin LDPE prices are not having an impact on rLDPE. According to recyclers, realistic rLDPE prices should be above €900. However, the demand is not strong enough, and the traditional Western European markets are now weak and extremely price sensitive. Prices above €800 can mostly be reached in Central European markets and south of that.

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|-------------------|--|--|--|---|---|
| rLDPE (MFI 0,6-1) | 820-1160 | 820-1160 | 820-1160 | 0/0 | 820-1160 |

In the last week of February **HDPE prices** were in a range of **1,180-1,360** €/**t.** They did not change compared to last week. The market was basically quiet. Supply is uncertain. Some grades of one of the largest Central European manufacturers are still under FM. Other Central European manufacturers still have stocks, and even small and large import shipments are constantly arriving. In general, there is enough supply on the market, however, some specific grades have completely disappeared. The supply of BM grades is expected to be tight in March. Although the price of ethylene monomer is not yet known, the HDPE producers have previously hinted at a price increase of 50 euros or more. Converters are willing to accept a smaller price increase of between €10 and €30, primarily in the case of lower prices. With high prices,



plastic converters are likely to wait and there will be some who will not buy at all in March. In the first week of March, we expect prices in a range of 1,220-1,390 €/t. Due to planned maintenance and unexpected shutdowns during the spring, the supply will be permanently limited.

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|-----------|--|--|--|---|---|
| HDPE BM | 1080-1230 | 1200-1340 | 1200-1360 | 120/130 | 1250-1400 |
| HDPE Film | 1080-1250 | 1200-1340 | 1200-1360 | 120/110 | 1250-1400 |
| HDPE IM | 1100-1200 | 1190-1320 | 1180-1320 | 80/120 | 1230-1380 |

In the last week of February HDPE-100 (Black & colored) prices were in a range of 1,250-1,480 ϵ /t. Although the price of ethylene monomer is not yet known, the HDPE producers have previously hinted at a price increase of 50-150 euros. Higher price increases are expected for lower prices. We expect prices for the first week of March to be between ϵ 1,350-1,500/t. Due to the weakness of the European construction industry, prices above ϵ 1,500 have little reality in March. However, if the HDPE price increase continues, the price of pipe grades will also continue to rise.

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|-----------------|--|--|--|---|---|
| HDPE Pipe (100) | 1300-1400 | 1250-1450 | 1250-1450 | -50 /50 | 1400-1500 |

In the last week of February, the range of **LLDPE C4** prices was **1,200-1,400** €/t. They did not change compared to last week. Availability is limited, but demand is not strong either. Also, smaller import shipments are constantly arriving. The European manufacturers want to raise their prices by around 50 euros, which will probably be partially followed by the importers. We expect March prices to be between €1,220-1,420/t.



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|----------|--|--|--|---|---|
| LLDPE C4 | 1150-1250 | 1150-1400 | 1200-1400 | 50/150 | 1200-1400 |

In the last week of February, (m)LLDPE (C6) prices were in a range of € 1,200-1,450/t. The price of LLDPE C6 was 1,200-1,400 €/t, while the price of mLLDPE was in a range of 1,250-1,450 €/t. They did not change compared to last week. Despite the fact that everyone calculated the price increase in March, demand remained weak. Most people expect that although European prices will follow the monomer price increase, import prices will remain at the February level.

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|---------------|--|--|--|---|---|
| (m)LLDPE (C6) | 1130-1250 | 1200-1450 | 1200-1450 | 70/200 | 1220-1500 |

POLYPROPYLENE GRADES

In the last week of February, **PPH Raffia** prices were in the range of €1,200-1,330/t. The upper values of the price bands increased slightly compared to the previous week. Despite the expected price increases in March, demand was not strong. The European PP producers have previously announced a price increase in a range of 50-100 €/t. But the actual price lists will have to wait until next week. In addition to the rise in March contract propylene monomer prices, the spot monomer price also rose. This also means that, in principle, considering realistic production costs, the cost of PPH exceeds 1,200 Euros. In the coming 2 months, we expect a limited supply due to planned maintenance. The situation is only aggravated by the unexpected shutdowns at both sites of the MOL Group. Consequently, the €50 price increase is expected to be successful, even though converters will wait until the first half of March.



price ranges in the last week of JANUARY 2023

TYPICAL polymer TYPICAL polymer price bands in the fourth week of FEBRUARY 2024

TYPICAL polymer price bands in the last week of FEBRUARY 2024

Price band change (last week of February - last week of January)

EXPECTED polymer price ranges in the first week of MARCH 2024

PPH Raffia 1100-1210 1200-1330 1200-1330 100/120 1250-1400

In the last week of February the prices of PPH IM non-specialty grades with low and medium melt flow index were in a range of 1,230-1,300 €/t and the prices of PPH IM with high melt flow index were in a range of 1,250 - 1,350 €/t. Compared to the previous week, the lower values of the price bands increased. In the last week, demand remained weak, converters were uncertain, they wanted to buy at a good price and a larger quantity at the same time. However, PP manufacturers and traders were already preparing for the March price increase.

In March, not only limited availability, rising prices, but also weak end-user demand will cause problems. As a result, converters will not be in a hurry to buy in March, expecting a possible price drop and correction. However, due to planned maintenance and unplanned breakdowns affecting significant capacities, availability in Central Europe is expected to be limited until the end of April or possibly mid-May. That is why there may be converters who may be left without feedstock in April. We still expect the prices of the first week of March to be in a wide price range between €1,250-€1,400/t.

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|-------------|--|--|--|---|---|
| PPH IM | 1090-1180 | 1230-1300 | 1230-1300 | 140/120 | 1250-1350 |
| PPH IM HMFR | 1100-1220 | 1230-1350 | 1230-1350 | 130/130 | 1270-1400 |

In the last week of February typical PPC prices were in a range of 1,320-1,510 €/t in Central-Europe. They did not change compared to last week. Demand is weak and availability has been tight in the past week. Converters are prepared for the price increase, most of them expect that the 50-100 €/t price increase announced by the polymer manufacturers will be followed by a smaller correction from mid-March. They also expect that there will be continuously incoming import shipments as well. Most converters have stocks until after Easter. Polymer producers are preparing for a price increase of 50-100, in some cases 150 euros, so the initial March prices will be in an extremely wide price range of 1,400-1,600 €/t.



price ranges in the last week of JANUARY 2023

TYPICAL polymer TYPICAL polymer price bands in the fourth week of FEBRUARY 2024

TYPICAL polymer price bands in the last week of FEBRUARY 2024

Price band change (last week of February - last week of January)

EXPECTED polymer price ranges in the first week of MARCH 2024

PPC 1140-1320

1320-1510

1320-1510

180/190

1380-1600

In the last week of February, the typical prices of MFI (8-15, 15-20) regranulates (PCR) of good quality, homogeneous color and narrow flow index range were in a range of €680-950/t. Compared to the previous week, the price range has not changed. The supply is wide, but the general demand is weak, despite the fact that some recyclers sold everything even by the end of March. Despite the increase in the price of virgin PP, the price of rPP remains unchanged. The likely reason for this is that demand in traditional rPP areas of use is weaker than usual. The prices of typically PIR-based grades with a higher flow index and quality (MFI (25-35)) is in a range of €920-1,150/t. The price range has not changed, however most sales are still under €1,000.

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|-----|--|--|--|---|---|
| rPP | 680-1150 | 680-1160 | 680-1160 | 0/10 | 680-1160 |

In the last week of February, PPR prices were in a range of €1,350-1,550/t. They did not change compared to last week. Demand is weak and availability has been tight in the past week. Converters are prepared for a price increase. Last week, PP producers announced a price increase of between 50-150 €/t. Due to weak demand, a price increase of EUR 50 is expected to be the most likely scenario. In the first week of March, prices are expected to be scattered in a wide price band between 1,390-1,600.

| | TYPICAL polymer | TYPICAL polymer | TYPICAL polymer | Price band change | polymer price |
|-----|---------------------|--------------------|--------------------|----------------------|---------------------|
| | price ranges in the | price bands in the | price bands in the | (last week of | ranges in the first |
| | last week of | fourth week of | last week of | February - last week | week of MARCH |
| | JANUARY 2023 | FEBRUARY 2024 | FEBRUARY 2024 | of January) | 2024 |
| PPR | 1230-1330 | 1340-1550 | 1340-1550 | 110/220 | 1390-1600 |



POLYSTYRENE

In the last week of February, typical **EPS** (white) prices were in a range of € 1,500 - 1,800/t. EPS has suddenly disappeared from the market for the past week. This is partly due to late import shipments and the order stop of European manufacturers. The reason behind the order-stop was the sudden rise in benzene prices, which foreshadowed the more significant SM price increase. From the middle of the last week, non-EU produced EPS was offered at a price close to €1,800/t. That is why the significant SM price increase of €222/t on Friday was no longer a surprise. Meanwhile, the March contract monomer price in North America did not increase. However, a smaller amount was exported than in the previous months. It is likely that the European PS manufacturers will significantly raise their prices following the SM price increase. Most insulation material manufacturers will react negatively to this. Since the demand in the construction industry is weak and the season hasn't started yet, they have inventories of both feedstock and finished products. Most of them believe that the momentum of the price increase will be broken, and the SM and EPS prices will start to decrease in April at the latest. In this way, they will only buy what is absolutely necessary in March. Several insulation material manufacturers have ordered EPS from the Middle East, the arrival of which is still delayed, so its replacement may induce additional demand. However, overall we expect weak demand and prices between €1,750-1,950/t.

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|-----|--|--|--|---|---|
| EPS | 1360-1550 | 1500-1700 | 1500-1700 | 140/150 | 1750-1950 |

In the last week of February, GPPS prices ranged from 1,570 to 1,700 EUR/t. Typical HIPS prices were in a range of 1,680-1,900 EUR/t. Demand remained weak despite expectations of price increases. Due to the significant MS price increase, polystyrene prices will also increase by more than 200 euros. Since converters failed to pass on the price increases in February as well, they will probably curb their demand even more in March due to the further significant price increase in March. Due to the Suez crisis, the Egyptian polystyrene producer is also struggling with MS supply problems. Thus, it is unlikely that cheap "relief" shipments will arrive in March either. We expect prices at the beginning of March between 1,750-1,950 €/t for GPPS and 1,850-2,100 €/t for HIPS.



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ICAL polymer TYPICAL polymer price bands in the last week of FEBRUARY 2024

Price band change (last week of February - last week of January)

EXPECTED polymer price ranges in the first week of MARCH 2024

| GPPS | 1320-1550 | 1570-1700 | 1570-1700 | 250/150 | 1750-1950 |
|------|-----------|-----------|-----------|---------|-----------|
| HIPS | 1450-1650 | 1680-1900 | 1680-1900 | 230/250 | 1850-2100 |

In the last week of February, natural ABS prices were in a range of €1,650-2,100/t. They did not change compared to last week. Demand remained weak. Most transactions were around or slightly below €1,800. European ABS manufacturers are expected to raise their prices in excess of €200. While demand remains weak, smaller import shipments are also arriving. We expect prices at the beginning of March to be between €1,720 and €2,200/t.

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|---------------|--|--|--|---|---|
| ABS (natural) | 1550-1900 | 1650-2100 | 1650-2100 | 100/200 | 1720-2200 |

POLYETHYLENE TEREPHTHALATE

In the last week of February, European PET Bottle grades prices were in a range of 1,120-1,200 €/t. Compared to the previous week, the lower value of the price band decreased slightly. Most transactions took place between €1,120-1,150/t. In March, PET manufacturers want to implement a small price increase, but demand does not support this now. Thus, unchanged prices are most likely in March.

In the case of rPET, the price of 'clear food-grades' was in the range of €1,250-1,400/t. In this segment, demand is constantly improving and we expect further improvement in March as well. As a result, an increase in the lower value of the price range is also likely. In the case of colored mixed rPET, the prices were scattered in a wide range of €600-880/t. The supply in this segment narrowed, although prices did not rise. In March, we expect a tight supply and prices to rise to a lesser extent ($\in 10-20/t$).



price ranges in the last week of JANUARY 2023

TYPICAL polymer TYPICAL polymer price bands in the fourth week of FEBRUARY 2024

TYPICAL polymer price bands in the last week of FEBRUARY 2024

Price band change (last week of February - last week of January)

EXPECTED polymer price ranges in the first week of MARCH 2024

PET bottle grade

1100-1200

1150-1200

1120-1200

20/0

1120-1200

POLYVINYL CHLORIDE

In the last week of February, European-made PVC (K67-68) prices were in the range of €850-990/t. The volume of imports decreased, and as a result, prices also increased. Typical import prices were usually over €800. Due to this and the expected rise in ethylene prices in March, a general PVC price increase of 20-30 euros in March is very likely. The only obstacle to price increases can only be weak demand. In the first week of March, we expect European-made PVC prices to be between €870-990/t.

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|--------------|--|--|--|---|---|
| S PVC powder | 930-1020 | 850-990 | 850-990 | -80/-30 | 870-990 |