1 General economy with reference to the plastics industry

The mood in German board rooms has deteriorated. The ifo business climate index fell to 96.5 points, after 97.7 points in October, see www.ifo.de/ifo-geschaeftsklimaindex. Companies were less satisfied with their current business situation. Furthermore, there was increased pessimism about expectations. Delivery bottlenecks and the fourth wave of coronavirus are causing problems for companies.

The index has also fallen in the manufacturing sector. Companies are assessing current business are much less good. Delivery bottlenecks for precursor products and raw materials are not easing for the companies. A clear majority of companies are planning to raise prices.

The 3rd quarterly report of the German Plastics Industry is now available. The quarterly report is published by the associations PlasticsEurope Deutschland, the Umbrella Association of the Plastics Processing Industry GKV and the VDMA Specialist Association of Plastics and Rubber Machinery and BKV GmbH.

Production: In the third quarter of 2021, production of plastics in the primary form fell by 0.7 % in comparison to the previous quarter. And in comparison to the previous year, production rose by a very healthy 19.2 %. For the second quarter in succession, the manufacture of plastic goods recorded a fall, and was 4.6 % lower than in the previous quarter. The previous year's level was surpassed by 2.8 %.

Sales: The sales of plastics in the primary form rose by 2.1 % in the third quarter in comparison to the previous quarter. And they were therefor 43.7 % higher than in the previous year. Sales in the manufacturing of plastic goods fell by 0.8 % in comparison to the previous quarter. In comparison to the previous year, sales were 12.2 % higher.

2 Primary markets: Standard plastics

The processors' demand for standard and technical plastics is still very high. There is still a shortage of imported material. Where possible, plastics processors are buying cautiously so as not to force prices up. Hopes that the demand for plastics will calm down are based on the imminent Christmas break.

The price rises for plastics are caused by the increases in energy prices, in particular natural gas and electricity. Moreover, precursor products have become more expensive. And freight capacities are still tight, there is thus a shortage of containers for transport on water and land. Moreover, there are not enough drivers to transport raw materials and goods.

The prices for standard plastics are going through the roof. In November 2021 the average price of 1,966 €/t was an average 132 €/t higher than in the previous month (1,834 €/t), see Table 1. In a year-on-year comparison, it can be seen that the average quotes from November 2021 (1,966 €/t) were as much as 955 €/t higher than those of the previous year (1.011 €/t), see EUWID, www.euwid-recycling.de. The prices for plastics made of PE were 100 €/t higher, PP 50 €/t, PS 280 €/t and PVC 130 €/t higher.

PET: The PET boom for packagings is continuing. And the supply of virgin grades is still stagnating. No end to the supply crisis is in sight for the time being. In October 2021, packaging PET was quoted on average at 1,590 €/t and thus 20 €/t higher than in the previous month, see https://www.kiweb.de/. The spot prices are in the range of 1,470 €/t to 1,560 €/t, see www.euwid.de/.

Table 1: Standard plastics prices according to EUWID over the past five months, listed in €/t.

Prices in €/t	November 2021	Oct. 2021	Sept. 2021	Aug. 2021	July 2021
LDPE film grade	1900- 2050	1800- 1950	1800- 1950	1800- 1950	1900- 2050
LLDPE film grade	1850- 2000	1750- 1900	1750- 1900	1750- 1900	1850- 2000
HDPE injection	1700- 1900	1600- 1800	1600- 1800	1600- 1800	1700- 1900

moulding					
HDPE blow	1650- 1850	1550- 1750	1550- 1750	1550- 1750	1650- 1850
moulding	2000- 2100	1720- 1820	1700- 1800	1750 1050	1750- 1850
PS crystal clear		11-1-1		1750- 1850	
PS high impact	2100- 2200	1820- 1920	1800- 1900	1850- 1950	1850- 1950
PP homopolymer	2100- 2300	2050- 2250	2050- 2250	2050- 2250	2050- 2250
PP copolymer	2150- 2350	2100- 2300	2100- 2300	2100- 2300	2100- 2300
PVC tube grade	1680- 1780	1550- 1650	1500- 1600	1480- 1580	1450- 1550
PVC film/cables	1780- 1880	1650- 1750	1600- 1700	1580- 1680	1550- 1650
Average Price	1966 ± 202	1834 ± 212	1822 ± 222	1826 ± 227	1860 ± 229

3 Secondary plastics markets in the plasticker price index

The plasticker internet platform, see http://plasticker.de, publishes quotes on an hourly basis. The present market report indicates the final monthly prices. It is only possible to represent the preliminary prices for the month of the report, in this case December 2021; they will not become definitive until early January 2022. The two quotes stated for December 2021 below indicate only an interim situation, see the left-hand column in Table 2 and Table 3.

3.1 plasticker: Standard plastics

The average price for November 2021 (588 €/t) was thus 39 €/t higher than that of the previous month (549 €/t), see Table 2. The average price for November 2021 (588 €/t) was 144 €/t above that of the previous year (444 €/t). There were significant price changes of greater than $\pm 40 €/t$ for: HDPE regranulates $\pm 40 €/t$ for: HDPE regranulates $\pm 40 €/t$ and PS regranulates $\pm 40 €/t$. The other changes in the quotes have not been taken into account due to the small number of reports. The regrinds of PP (730 €/t), PS (760 €/t) and PET_mixed colours (520 €/t) have reached 5-year highs. PP regranulates are listed at 1,530 €/t in the price index - an all-time high. The price index is characterised by subdued demand for plastic.

The preview of the December shows a higher average price in the amount of 627 €/t than that of the previous month (588 €/t), see Table 2. The price index of 13.12.2021, shows satisfactory demand for plastic to date.

Table 2: Standard plastics price according to plasticker; listed in €/t.

	December ⁶ 21	November 21	Oct. 21	Sept. 21	Aug. 21	Nov. 20
HDPE regrind ¹	600	580	570	620	630	490
HDPE regranu- lates ⁵	880	960	880	830	920	670
LDPE bale goods ²	350*	370*	170*	290*	270*	200*
LDPE regrind ¹	470*	430*	340*	380	420	470
LDPE regranu- lates ⁵	840	890	740	690	700	540
PP bale goods ³	260*	380*	570*	0*	0*	170*
PP regrind ¹	620	730*	650	620	570	480
PP regranulates ⁵	1380	1530	970	930	880	690
PS regrind ⁴	740*	760*	700	700*	650*	540
PS regranulates ⁵	1140	990	920	890	850*	700*
PVC_P regrind ¹	490*	0*	360*	270*	400*	350*
PVC_U regrind ¹	480*	0*	0*	50*	540*	430
PET bale goods	70*	90*	290*	180*	160*	180*
PET regrind mixed colours	460	520	520	420	440	300

Average Price	(627)	588	549	491	531	444

^{*:} Supply figure too low to attain statistical significance; ¹: equivalent to the grade "post-industrial mixed colours"; ²: equivalent to K49; ³: equivalent to K59; ⁴: equivalent to "standard, mixed colours"; ⁵: equivalent to the grade "regranulates, black"; ⁶: preview (may be amended by additional quotes)

3.2 plasticker: Technical plastics

For November 2021, there was an average price of 1,717 €/t, which was 164 €/t higher than that of the previous month (1,553 €/t), see Table 3. The average price for November (1,717 €/t) was as much as 562 €/t higher than that of the previous year (1,155 €/t).

These plastics show price changes of more than ± 70 €/t: ABS regrind +220 €/t, ABS regranulates +90 €/t, PC regranulates +330 €/t, PBT regrind +140 €/t, PA 6 regranulates -120 €/t, PA 6.6 regrind +260 €/t, PA 6.6 regranulates +210 €/t and POM regranulates +460 €/t. There is a great deal of movement in the individual quotes. ABS regrind, PC regranulates, PA 6 regranulates, PA 6.6 regranulates, POM regrind and POM regranulates all recorded a 5-year high. The price index shows a subdued demand for plastic.

The probable average price in December (1,795 €/t) is quoted higher than in the previous month (1,553 €/t). The December price index of 13.12.2021 shows satisfactory demand for plastic.

	December ⁶ 21	November 21	Oct. 21	Sept. 21	Aug. 21	Nov. 20
ABS regrind	910	880	680	660	630	560
ABS regranu- lates ⁵	2140	1900	1810	1900	2390	990
PC regrind	950	1010	950	930	1000	780
PC regranulates ⁵	3080	2560	2230	2410	2130	1680
PBT regrind	720*	680*	540	710	560	430
PBT regranulates	2180	2170	2210	2200	2440	1670
PA 6 regrind	1000*	950*	890	1060	970	870
PA 6 regranu- lates ⁵	2440	2480	2360	2420	2310	1800
PA 6.6 regrind	1210	1190	930	1070	1040	920
PA 6.6 regranu- lates ⁵	3280	3190	2980	2570	2550	2100
POM regrind	790	800*	730	700	650	570
POM regranu- lates ⁵	2840	2790	2330	2780	2160	1490
Average Price	(1795)	1717	1553	1618	1569	1155

Table 3: Technical plastics price according to plasticker; listed in €/t.

4 Secondary Plastics Markets

Just like plasticker, EUWID reports price rises for standard plastics at the same level. The demand for plastic wastes and recyclates is good.

The EUWID price index for November shows rises in all quotes. This is true for bale goods as well as regrinds. And the EUWID price index shows rises both for all production wastes and for PE post user wastes. The average price rises are in the range of 5 €/t to 63 €/t.

⁵: equivalent to the grade "regranulates, black"; ⁶:preview (may be amended by additional quotes).

4.1 Plastic wastes

There is still strong demand for all film wastes. In the film sector, the volume from pi - post industrial - and pc - post consumer - is still severely limited. The volume of manufacturing and processing wastes is also limited. And these wastes are therefore quoted correspondingly higher. Hopes that the tight situation for secondary plastics will calm down are based on the imminent Christmas break.

The changed prices for PE post user wastes are as follows: LDPE shrink hoods natural 480-540 €/t, LDPE shrink hoods mixed colours 150-230 €/t, film transparent natural <70 µm 380-430 €/t, film transparent coloured <70 µm 130-160 €/t, LDPE agricultural film b/w -40 bis -20 €/t, commercial mixed film (90/10) 235-270 €/t, commercial mixed film (80/20) 180-220 €/t, HDPE blow-moulded bodies_coloured 230-340 €/t, HDPE crates_mixed colours 580-720 €/t and HDPE crates mixed colours 500-580 €/t.

The export of German plastic wastes abroad is falling significantly. And this is just as much the case for exports within the EU as those from the EU to OECD countries and non-OECD countries. Or, to put it another way, recovery of plastic wastes is mostly done in Germany. However, the fact that plastics imports are limited is negative for German plastics recyclers. According to reports from EUWID RE, 35/2021, in the first half of the year, the import of plastic wastes to Germany amounted to 207,000 tonnes and exports 355,600 tonnes, Or, put another way, there was an export surplus of only 148,600 tonnes.

4.2 Recyclates

Plastic recycling is determined by an extreme situation of a shortage of virgin grades and recyclates. Plastics recyclers report that their recyclates are sold out months in advance. Inquiries are mounting up from plastics processors who have previously refused to use recyclates. Surprisingly, there are now no longer any complaints about the recyclate grades. And price negotiations about recyclates are only a minor point if the quantity is right, And finally, it remains to be said that the prices for recyclates constantly surpass those of virgin grades.

But, in addition to this good news, it must be stated that plastics recyclers have to deal with higher purchase prices for the processing input, much higher energy costs, a lack of spare parts in production and increased wage costs.

PE production wastes are quotes at an average 30 €/t, PP production wastes 26 €/t, PVC production wastes 18 €/t, PVC window grade 10 €/t and PS production wastes 28 €/t higher.

4.3 PET Recycling

PET is setting the trend in the packaging sector, in this case for bottles, dishes and films. In the packagings sector, the demand for PET flakes and PET regranulates is very high. In particular, discounters and food retailers are trying to secure the required quotas of r-PET for 2022.

The PET recyclers are still complaining about the severely insufficient quantities of used beverage bottles. The prices for used PET single-use bottles changed in November as follows: PET transparent +15 €/t, PET mixed +15 €/t, and PET coloured +10 €/t.

The shortage of PET is driving the prices both for virgin grade and for recyclates. The virgin grade prices are being reached and even surpassed by the prices for regranulates. At the peak, up to 1,960 €/t are charged for food-safe regranulates. Detailed monthly reports on the PET prices for virgin grade and used bottles can be found in EUWID and KI Plastics Information Europe.

5 Explanation on the price quotes

A detailed discussion with information of price indices for virgin grades and waste plastics as well as precursor products can be found in EUWID Recycling and Disposal see www.euwid.de, or in EUWID Plastics www.euwid-kunststoff.de. EUWID: No guarantee for any of the prices.; prices ex station. As a rule, the prices quoted refer to quantities in excess of 20 tons.

The quotes for secondary prices, which are updated on an hourly basis, can be calculated using the price lists that are derived from the quotations published in the raw material exchange plasticker, see www.plasticker.de. The prices listed in this index are quoted without reservation - as the majority of the quotes submitted are not necessarily equivalent to the sales prices. Plasticker offers the quality grades regrind and regranulates both as virgin materials and as secondary goods. The term 'bale goods' refers to waste plastics only. Furthermore, plasticker does not distinguish between the following grades: transparent, mixed colours or colour-separated. Therefore, the information provided by plasticker may indicate different market behaviour than the prices quoted by EUWID

Bonn, Monday, 20. December 2021

Dr Thomas Probst, byse