## 1 General economy and reference to the plastics industry

ifo business climate index: The mood in companies has improved slightly. The ifo business climate index rose to 87.3 points in November, following on from 86.9 points in October, see <u>https://www.ifo.de/fakten/2023-11-24/ifo-geschaeftsklimaindex-gestiegen-november-2023</u>. This is the third rise in a row. Companies assess their current business situation as somewhat better. Pessimism about expectations for the months ahead has also fallen. The German economy is stabilising at a low level.

The business climate index has risen markedly in the manufacturing sector. Companies were more satisfied with current business. Scepticism about the months ahead fell strongly. This is especially the case for many energy-intensive sectors. However, companies are still complaining about a shortage of new orders.

The ZSVR – Zentrale Stelle Verpackungsregister [Packaging Register Central Office] has published the recycling statement for 2022, see

https://www.verpackungsregister.org/information-orientierung/neuigkeiten-presse/ pressemitteilungen-aktuelles/detail-ansicht-newseintraege/news/aktuelle-recyclingbilanz-erfolgeverfehlungen-und-herausforderungen-wie-wir-es-erreichen-dass-verpackungen-hochgradigrecyclingfaehig-sind. Increasing quantities of packagings are extremely recyclable, the statutory recycling goals are largely met by the Dual System. In 2022, however, some of the material-specific statutory quotas were seriously missed.

In 2022, on average the dual systems met and sometime greatly exceeded the ambitious statutory targets for the recycling of packagings made of paper and cardboard, tin, aluminium and plastic. This means that considerable quantities of these materials are sent to recycling. For example, for plastic packagings the rate for quantities sent to material recycling was 67.5 %, thus 4.5 percentage points higher than the statutory prescribed minimum level - four years earlier it was still well below 50 %.

On average of all dual systems, the statutory recycling targets for glass packagings, drinks cartons and other compound packagings is largely missed. Nevertheless, more than 50 % of wastes collected in the recycling bin are sent for recycling.

# 2 Primary markets - standard plastics

In November 2023, the EUWID average price of  $1,394 \notin t$  was  $68 \notin t$  lower than in the previous month  $(1,462 \notin t)$  see Tab. 1. In a year-on-year comparison, it can be seen that the average quotes from November 2023  $(1,394 \notin t)$  were 285  $\notin t$  lower than those of the previous year  $(1,679 \notin t)$ .

The quotes for plastics fell markedly, by 50  $\notin$ /t for LDPE, 50  $\notin$ /t for LLDPE, 50  $\notin$ /t for HDPE, 50  $\notin$ /t for PP, 150  $\notin$ /t for PS and 40  $\notin$ /t for PVC. The situation for standard plastics is portrayed well in EUWID, see <u>www.euwid-recycling.de</u>, and PIE – Plastic Information Europe, see <u>https://pieweb.plasteurope.com/</u>.

# bvse market report: plastics, December 2023

Prices in €/t	Nov. 2023	Oct. 2023	Sept. 2023	Aug. 2023	July 2023
LDPE film grade	1230- 1260	1280- 1310	1200- 1250	1160- 1210	1160- 1210
LLDPE film grade	1230- 1270	1280- 1320	1200- 1260	1130- 1230	1130- 1230
HDPE injection moulding	1230- 1280	1280- 1330	1220- 1270	1170- 1220	1170- 1220
HDPE blow moulding	1210- 1290	1260- 1340	1200- 1280	1150- 1230	1150- 1230
PS crystal clear	1720- 1800	1870- 1950	1810- 1890	1640- 1720	1560- 1640
PS high impact	1850- 1900	2000- 2050	1940- 1990	1770- 1820	1690- 1740
PP homopolymer	1370- 1430	1420- 1480	1390- 1450	1330- 1420	1330- 1420
PP copolymer	1420- 1480	1470- 1530	1440- 1500	1380- 1470	1380- 1470
PVC tube grade	1110- 1210	1150- 1250	1130- 1230	1100- 1200	1110- 1210
PVC film/cables	1240- 1340	1280- 1380	1260- 1360	1230- 1330	1240- 1340
Average Price	1394 ± 236	1462 ± 276	1414 ± 272	1345 ± 225	1337 ± 193

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

PET: Unfortunately, the PET markets are still under great pressure. The markets are characterised by oversupply and sluggish demand. Even though PET is increasingly becoming the most used packaging plastic. Refundable milk containers will soon also be made of PET. Commercial and private consumers are ordering only small quantities of PET. Hopes for increased demand for PET drinks bottles rest on Christmas and New Year. In November 2023, packaging PET was quoted on average at  $1,215 \notin/t$  and this  $15 \notin/t$  lower than in the previous month, see PIE – Plastic Information Europe<u>ht-tps://pieweb.plasteurope.com/</u>. However, virgin grade is also traded in the region of  $1,020 \notin/t$  to  $1,110 \notin/t$  on the spot markets, see <u>www.euwid-recycling.de</u>.

### 3 Secondary plastics markets in the plasticker price index

The plasticker internet platform, see <u>http://plasticker.de</u>, 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 2023; they will not become definitive until early January 2024. The two quotes stated for December 2023 below indicate only an interim situation, see the left-hand column in Table 2 and Table 3.

### 3.1 plasticker: Standard plastics

The standard plastics were quoted at an average 569  $\notin$ /t in November 2023 and were thus 46  $\notin$ /t lower than the average quote for October of 615  $\notin$ /t, see Tab. 2. The average price for November 2023 (569  $\notin$ /t) was 172  $\notin$ /t below that of the previous year (741  $\notin$ /t).

There were significant price changes of greater than  $\pm 40 \notin /t$  for: HDPE regrind -60  $\notin /t$ , PP regranulates -90  $\notin /t$ , PET bale goods +130  $\notin /t$  and PET regrind mixed colours -290  $\notin /t$ . Considerations of price changes with supply figures that are too low are not included here. The November price index is characterised by stagnating demand in comparison to the previous month.

The probable average price in December 2023 (588  $\notin$ /t) is thus only 18  $\notin$ /t higher than in the previous month, see Tab. 2. And this indicates price stability. The price index of 11.12.2023, shows adequate demand for plastic.

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	December <sup>6</sup> 23	Nov. 23	Oct. 23	Sept. 23	Aug. 23	Nov. 22
HDPE regrind <sup>1</sup>	580	580	640	610	610	720
HDPE regranulates <sup>5</sup>	860	880	920	860	870	960
LDPE bale goods <sup>2</sup>	230*	160*	300*	170*	300	310
LDPE regrind <sup>1</sup>	410*	360*	290*	180*	180	520*
LDPE regranulates <sup>5</sup>	860	800	840	700	760	940
PP bale goods <sup>3</sup>	240	200*	220	250*	290	380
PP regrind <sup>1</sup>	580	600	640	640	650	840
PP regranulates <sup>5</sup>	850	850	940	860	960	1090
PS regrind <sup>₄</sup>	710	680	710	760	960	870*
PS regranulates <sup>5</sup>	1040	1000	980	1020	1070	1220
PVC_P regrind <sup>1</sup>	710*	660*	700*	720*	530	860*
PVC_U regrind <sup>1</sup>	560	550	630*	630*	670	730*
PET bale goods	410	450	320	250*	300	400
PET regrind mixed colours	190*	190*	480	430	460	550
Average Price	(588)	569	615	577	615	741

Table 2: Standard plastics price according to plasticker; listed in  $\notin/t$ .

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

#### 3.2 plasticker: Technical plastics

For November 2023, there was an average price of 1,628 €/t, which was 100 €/t lower than that of the previous month (1,728 €/t), see Table 3. The average price for November 2023 (1,628 €/t) was 245 €/t below that of the previous year (1,873 €/t).

Clear price declines have been seen for some commodities. Granulates in particular are affected by the large price falls. There were significant price changes of greater than  $\pm 70 \notin t$  for: PC regranulates  $\pm 110 \notin t$ , PA 6 regrind  $\pm 80 \notin t$ , PA 6 regranulates  $\pm 270 \notin t$ , PA 6.6 regranulates  $\pm 350 \notin t$  and POM regranulates  $\pm 290 \notin t$ . The November price index is characterised by subdued demand for plastic.

The probable average price in December 2023  $(1,651 \notin t)$  is thus 23  $\notin t$  higher than in the previous month  $(1,628 \notin t)$ . This indicates price stability at a low level. The price index of 11.12.2023 shows adequate demand for plastic.

	December <sup>6</sup> 23	Nov. 23	Oct. 23	Sept. 23	Aug. 23	Nov. 22
ABS regrind	740	670	700	750	850	840
ABS Granulat5	1490	1350	1400	1320	1360	1820
PC regrind	1110	1210	1270	1260	1290	1310*
PC Granulat5	2330	2190	2080	2300	2520	2820
PBT regrind	600	660	670	680*	740	700*
PBT regranulates	2380	2450	2520	3230	3260	2310
PA 6 regrind	940	970	1050	1130	1190	1070
PA 6 regranulates <sup>5</sup>	2530	2340	2610	2610	2570	3020
PA 6.6 regrind	1020	1130	1190	1240	1280	1180*
PA 6.6 regranulates⁵	3270	3130	3480	3980	4070	3760
POM regrind	700	690	740	750	760	860

Table 3: Technical plastics price according to plasticker; listed in  $\notin/t$ .

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POM regranulates <sup>5</sup>	2700	2740	3030	3250	3100	2790
Average Price	(1651)	1628	1728	1875	1916	1873

\*: Supply figure too low to attain statistical significance; <sup>5.</sup> equivalent to the grade "regranulates, black"; <sup>6.</sup> preview (may be amended by additional quotes)

#### 4 Secondary plastics markets

There is not only a lack of sales of virgin grade for primary plastics – there is no market impetus, either. Private and commercial consumers are ordering virgin grade only very tentatively. Sales of plastic products have stalled in every sector of the economy.

And this difficult situation is reflected into the secondary markets. Or, to put it another way, the situation is still very difficult for plastics recyclers. No improvement to the current situation is in sight. The hopes for a turnaround are based on the second half of 2024. We are now seeing increasing numbers of insolvencies – recycling capacities are shrinking. Recyclers are trying to bridge the difficult situation with short-term working.

Recyclers and plastics processors are preparing for the end of the financial year; as a result of this, there may be special effects in the markets. Plastics experts report that recycling is entering the Christmas break now, in mid-December. A longer winter break should be expected.

In general, there is only low demand for plastic wastes from recyclers. The recyclers' warehouses are full, both in terms of processing input (plastic wastes) and output (recyclates). There is hardly any demand for recyclates from downstream plastics processors.

#### 4.1 Recycling standard plastics

The sorting plants work all year round, in spite of the desperate situation in plastic recycling. The sorted fractions still find their way into domestic, European and worldwide plastic recycling.

The report from the plastics trade for exports and imports in the first nine months of 2023 are now available, see EUWID RE 48, 2023, 25. Both imports (349,200 t in 2023 and 427,400 t in 2022) and exports (507,700 t in 2023 and 574,600 t in 2022) decreased markedly – these are long-term lows. However, exports to the Far East (Malaysia, Indonesia, Vietnam) have risen again.

Mixed plastic recycling works in these times of crisis, in this case mainly by selling the items products on European markets, and is stable, but at a low level. Furthermore, there are niches in plastic recycling, which can be quickly supplied with good grades of recyclates. Environmentally conscious companies are continuing to rely on the use of recyclates, not least to avoid "plastic bashing".

The prices for plastic wastes are still falling, for bale goods from PE product waste by  $12 \notin/t$  on average, for PE post user by  $12 \notin/t$  and for PP production waste by only  $3 \notin/t$ , see <u>www.euwid-recycling.de</u>. Or, to put it another way, plastic wastes are clearly losing value in small steps.

Recyclate prices, in this case for regrinds, are also falling, see <u>www.euwid-recycling.de</u>. Regrinds of PE production waste are quoted on average 19  $\notin$ /t lower, PE post user 10  $\notin$ /t, PP production wastes 25  $\notin$ /t, PS productions wastes 31  $\notin$ /t, PVC productions wastes 16  $\notin$ /t and PVC window grade 17  $\notin$ /t.

Quotes for regranulates are slightly lower, see <u>https://pieweb.plasteurope.com/</u>. LDPE and HDPE are broadly recording price stability. LDPE grades are falling by  $8 \notin t$  on average. On average, PP and PS are quoted 10  $\notin t$  lower across all types.

## 4.2 Recycling technical plastics

In plasticker, the November quotes are clearly falling, by an average of 100 €/t. In November, technical plastics were quoted on average at 1,628 €/t. Further price falls are probable.

In PIE – Plastic Information Europe, the regranulates prices fell sharply again in November 2023, see <u>https://pieweb.plasteurope.com/</u>. The price falls are between  $10 \notin t$  and  $135 \notin t$ , depending on the compound.

# 4.3 PET recycling

PET markets are still characterised by over-supply – there is no demand. The over-supply of PET, in this case virgin grade and recyclates (flakes and regranulates), is putting pressure on the prices actually paid. 2023 is over for recyclers. PET recyclers are starting a longer winter break.

In November, too, the prices for used PET single-use bottled were unchanged in comparison to the previous month, see EUWID. The difference between clear recycled flakes and virgin grade is an average  $335 \notin t$ , see PIE – Plastic Information Europe. Prices of between 750  $\notin t$  and 900  $\notin t$  are paid for clear flakes. In PIE – Plastic Information Europe, regranulates are quoted as more expensive than virgin grade. Detailed monthly reports on the PET prices for virgin grade and used beverage bottles can be found in EUWID and PIE - 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 <u>www.euwid.de</u>. EUWID: No guarantee for any of the prices here; 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 <u>www.plasticker.de</u>. 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

A detailed discussion with information of price indices for virgin grades and waste plastics as well as precursor products can be found in PIE – Plastics Information Europe, see <u>www.kiweb.de</u>. For virgin grades, the indices for standard plastics (Plastixx ST) and technical plastics (Plastixx TT) provide a good overview of the price trends. Pieweb quotes the monthly regranulates prices for standard plastics and technical plastics in the secondary markets. For secondary plastics, there are also details on PET, in this case flakes (flakes transparent, flakes mixed colours) as well as transparent regranulates.

Bonn, Monday, 8. January 2024

Dr. Thomas Probst, bvse