### The general economic situation of the plastics industry

Germany's plastics industry is the largest in Europe. The German plastic industry's report for the third quarter of 2018, published by PlasticsEurope Germany, is now available. In the present quarterly report, Germany's plastics industry is compared to that of Europe as a whole.

The production index of the Federal Bureau of Statistics shows that the production of plastics in primary form stagnated in the third quarter compared to the second quarter. The previous year's level (- 3.0 %) was no longer attained. The turnover of plastics in primary form fell by 0.3 % compared to the previous quarter. A comparison with the same period of the preceding year reveals that the turnover reached in the third quarter of 2018 even fell by 1.1 %.

The production index shows that the manufacture of plastic materials fell by 1.2 % compared to the previous quarter. A comparison with the same period of 2017 shows the fall in production to be 1.2 %, too. The turnover reached in the manufacture of plastic materials fell by 0.3 %. A comparison with the same period of last year shows that the turnover reached in the third quarter of 2018 is 0.8 per cent higher.

A comparison of Germany's development with that of Europe as a whole makes it possible to provide explanations for Germany's overall trend. The European production index reveals that the production of plastics in primary form stagnated in the third quarter compared to the second quarter. The previous year's level (- 3.5 %) was no longer reached. The amount of plastic materials manufactured in Europe fell by 0.9 % in the third quarter. A comparison with the same period of the previous year shows that production fell by 1.4 %.

## 1 The primary plastics market concerning standard plastics

The Price Watch for standard plastics published in November 2018 shows the average listings to be 1297 €/t. And thus, the average listings fell by 34 €/t compared to the previous month, cf. Table 1. The price falls refer to LDPE and LLDPE (each - 20 €/t), HDPE (- 5 €/t), PS (-130 €/t), PP (-5 €/t) and PVC (- 10 €/t). It is surprising to see that the listing for PS fell markedly for the second time in succession. From September to October, the PS price fell by 70 €/t, and from October to November, its price even dropped by 130 €/t! The developments in the PS price are running parallel to the price fall in styrene. Packaging PET was quoted at an average 1370 €/t in October 2018 and thus, 70 €/t lower than in the previous month. The supply of and demand for standard plastics are assessed as balanced. A comparison of 2017 and 2018 shows that the average listing for November 2018 (1297 €/t) is almost equal to that for last year (1293 €/t).

Table 1:	EUWID listings for	standard plastics	over the past five	ve months; prices in €/t.

Prices in €/t	Nov. 2018	Oct. 2018	Sept. 2018	Aug. 2018	July 2018
LDPE film grade	1220- 1330	1240- 1350	1260- 1370	1280- 1390	1290- 1400
LLDPE film grade	1200- 1320	1220- 1340	1240- 1360	1260- 1380	1270- 1390
HDPE injection moulding	1300- 1360	1310- 1360	1310- 1360	1310- 1360	1310- 1360
HDPE blow moulding	1320- 1380	1330- 1380	1330- 1380	1330- 1380	1330- 1380
PS crystal clear	1380- 1440	1500- 1580	1570- 1650	1520- 1580	1500- 1560
PS high impact	1480- 1540	1600- 1680	1670- 1750	1620- 1680	1600- 1660
PP homopolymer	1410- 1470	1420- 1470	1420- 1470	1420- 1470	1420- 1470
PP copolymer	1460- 1520	1470- 1520	1470- 1520	1470- 1520	1470- 1520
PVC tube grade	900- 960	910- 970	910- 970	910- 970	910- 970
PVC film/cables	950- 1000	960- 1010	960- 1010	960- 1010	960- 1010
Average Price	1297 ± 198	1331 ± 222	1349 ± 240	1341 ± 223	1339 ± 219

### 2 The secondary plastics market according to the Plasticker Price Index

The plasticker internet platform, cf. <a href="http://plasticker.de">http://plasticker.de</a>, 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 December 2018. These listings thus merely reflect an interim situation that will not become definitive until the beginning of January, cf. the left-hand columns in Tables 2 and 3.

### 2.1 Standard plastics:

In November standard plastics were listed at  $544 \in /t$ , which means that their price did not change relative to the preceding month, cf. Table 2. The average price for November 2018 ( $544 \in /t$ ) was as much as  $34 \in /t$  higher than that for the previous year ( $512 \in /t$ ). The following prices changed by more than  $\pm 40 \in /t$ : HDPE regranulates  $\pm 50 \in /t$ , PVC\_P  $\pm 60 \in /t$ , PVC\_U  $\pm 50 \in /t$  and PET bale goods  $\pm 60 \in /t$ . A comparison of the November price index with that for the previous month shows that demand for plastics is relatively low.

The preview of the December listings shows the average price, which reached 561 €/t, to be 17 €/t higher than in the previous month (544 €/t). The price index of 13 December 2018 shows demand for plastics to be restrained to date.

	Dec. <sup>6</sup> 18	Nov. 18	Oct. 18	Sept. 18	Aug. 18	Nov. 17
HDPE regrind <sup>1</sup>	590	570	570	590	570	550
HDPE regranulates <sup>5</sup>	830	840	890	860	850	840
LDPE bale goods <sup>2</sup>	230	230	240	210	190	230
LDPE regrind <sup>1</sup>	580	600	580	580	550*	550
LDPE regranulates <sup>5</sup>	740	750	770	780	770	690
PP bale goods <sup>3</sup>	180	170	150	140*	150*	190
PP regrind <sup>1</sup>	560	550	540	590	600	510
PP regranulates <sup>5</sup>	960	890	810	800	840	830
PS regrind <sup>4</sup>	660	640	670	630	640	590
PS regranulates <sup>5</sup>	1090*	990	980	1130	1110	830
PVC_P regrind <sup>1</sup>	400*	330*	390	330*	280*	340*
PVC_U regrind <sup>1</sup>	390*	450*	450	400*	410*	510*
PET bale goods	230*	240*	180*	110*	120*	170
PET regrind coloured	410	370	410	340	330	340
Average Price	(561)	544	545	535	529	512

Table 2: Listings for standard plastics in plasticker; prices in €/t.

#### 2.2 Technical plastics:

Since September technical plastics prices have been rising considerably. In November 2018, the average technical plastics price was listed at 1364 €/t in plasticker, which means it was 63 €/t higher than in the previous month, when it had reached 1301 €/t, cf. Table 3. A comparison of the average price for November 2018 (1364 €/t) with that for the previous year (1273 €/t) shows the current price to be 91 €/t higher.

The November price index reveals sufficient demand for technical plastics. Considerable price rises are discernable. The following prices changed by more than ± 70 €/t: ABS regranulates +110 €/t, PC regrind +90 €/t, PC regranulates -150 €/t, PA 6.6 regrind +90 €/t, PA 6.6 regranulates +440 €/t and POM regranulates +90 €/t. PBT regrind is quoted at 1840 €/t and is thus at its highest level in 45 months. PA commodities have reached record highs:

<sup>\*:</sup> Supply figure too low to attain statistical significance; 1: equivalent to the grade 'post-industrial, mixed colours';

<sup>&</sup>lt;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 that may be amended by additional quotes

the last time the price of PA 6 regrind was higher than today was in August 2016, and the price paid for PA 6 regranulates was last exceeded in November 2014. The last time the price of PA 6.6 regrind was higher than today was in March 2016. The price of PA 6 regranulates has reached the highest level in five years.

Prices are expected to rise considerably once again in December. A preview of the December listings of 13 December 2018 shows the average price, which has reached 1448 €/t, to be 84 €/t higher than in the previous month. The December price index shows demand for plastics to be restrained to date.

	Dec.º	Nov. 18	Oct. 18	Sept. 18	Aug. 18	Nov. 2017
	18					
ABS regrind	680	670	620	640	630	590
ABS regranualtes <sup>5</sup>	1440	1350	1440	1380	1370	1520
PC regrind	970	930	840	930	1000	880
PC regranulates <sup>5</sup>	2280	2220	2370	2010	1990	2030
PBT regrind	620	490	460	460	450	470
PBT regranulates	1850	1840	1790	1700	1640	1630
PA 6 regrind	890	920	880	840	830	820
PA 6 regranualtes <sup>5</sup>	2080	1970	1920	1780	1780	1820
PA 6.6 regrind	990	960	870	910	890	830

1980

650

1790

1301

1950

640

1680

1243

2010

660

1660

1243

1820

760

2110

1273

Table 3: Listings for technical plastics in plasticker; prices in €/t.

2460

690

1880

1364

### 3 Evaluation of the secondary plastics markets

2460

690\*

2430

(1448)

PA 6.6 regranulates<sup>5</sup>

POM regranulates<sup>5</sup>

POM regrind

**Average Price** 

2018 was marked by disruptions and changes concerning plastics recycling. The first incident to be mentioned is the tight ban on waste plastic exports to China, as a result of which Germany's and Europe's plastic markets are being inundated with those waste types that were previously shifted to the Far East.

While plastics recycling is benefiting from this development, industrial sites are having trouble forwarding the used plastics to waste disposers. Waste plastic prices have finally reached an acceptable level for plastic recyclers. In eastern Europe, the existing plastic recycling scheme is being expanded successfully. In Europe, plastics recycling is benefiting from the large supply of used plastics.

It is pleasing to see that new sorting plants are being built in Germany. This is because these can now be used to separate the higher quantities of recycling materials into higher qualities. The bottleneck of waste separation, which has limited the amount of plastics subsequently recycled, is broadening.

In Germany, the existing plastics recycling scheme is being extended and expanded. First of all, it should be noted that recycling plants are scaling up. The aim is to achieve an input capacity of 120,000 tonnes annually for recycling plants or networks of recycling plants. Takeovers by waste disposal companies have also been seen. And finally, discounters are becoming increasingly involved in this market segment. Above and beyond this, the beverage industry is continually raising its PET recycling capacity. And this involvement in plastics recycling is being supplemented by targeted takeovers of recycling plants through the plastics manufacturing industry. In addition to this, the plastics manufacturing industry is looking for channels to set up recycling processes for raw materials.

<sup>&</sup>lt;sup>5</sup>: equivalent to the quality grade 'regranulates, black; <sup>6</sup>: preview that may be amended by additional quotes.

#### 3.1 Waste plastics:

A comparison of the information provided by EUWID and plasticker for November 2018 shows that the listings for standard plastics have remained largely unchanged in the two price indices. Demand for used plastics is assessed as calm by both indices. According to plasticker, December is proving to be calm, too.

According to the EUWID Price Watch for used plastics published in November 2018, prices have hardly changed. Some select listings are fluctuating slightly. While the price of natural thin film, for example, is listed 10 €/t higher, the price of coloured thin film has fallen by 5 €/t. The prices of post-industrial PP, PVC window frame regrind and post-industrial PS have held their own.

Plastics recycling in practice shows that post-user film grade can only be sold at considerable supplement payments. The prices listed in the indices for waste plastics only apply so long as recyclers are offering sufficient quantities and high qualities.

## 3.2 Recyclates:

Plastic recyclates are in great demand. As far as standard plastics are concerned, the recyclate prices for regrind, regranulates and compounds have remained unchanged. To date, recyclate prices have held their own despite the price falls in virgin materials. At yearend, markets have become markedly calmer than in the previous months. There are structural bottlenecks in technical plastics that are causing ABS and PA prices to rise considerably.

Despite the fall in bottle quantities, PET recyclers are still able to cover their needs with sufficient input. In the next four months, the supply of bottles is expected to fall. The prices of used beverage bottles will mirror these shortages. However, recyclers are often able to import bottles at favourable prices. In the November listings, the prices of used PET beverage bottles in the November listings remained unchanged compared to the previous month. PET recyclates continue to be in good demand. And thus, PET recyclate prices held their own in November, too.

#### 4 Explanatory information on the price listings

For a detailed analysis including information on price indices for virgin materials, used plastics and precursors, please go to EUWID Recycling und Entsorgung (Recycling and Waste Management), cf. <a href="www.euwid.de">www.euwid.de</a>, or EUWID Plastics, <a href="www.euwid-kunststoff.de">www.euwid-kunststoff.de</a>. EUWID: no guarantee for any of the prices. All EUWID prices are quoted ex works. As a rule, the prices quoted refer to quantities in excess of 20 tonnes.

The monthly quotes for **secondary plastics**, which are updated on an hourly basis, can be calculated using the price lists derived from the quotations published in the raw material exchange **plasticker** (<a href="www.plasticker.de">www.plasticker.de</a>). The prices listed in this index are quoted with 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 materials. 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.