1 General economy with reference to the plastics industry

In mid-June PlasticsEurope Deutschland published its report on the first quarter of 2019 for the plastics industry in Germany. The production index shows that in the first quarter of 2019, the production of plastics in primary form fell by 2.0 % in comparison to the previous quarter. The previous year's level was missed by -9.3 %. The manufacture of plastic goods recorded zero growth in comparison to the previous quarter. In comparison to the previous year, a production fall of -1.9 % was recorded. The turnover index shows that the sales of plastics in the primary form fell by 1.6 % in the first quarter in comparison to the previous quarter. Turnover fell by 4.6 % in comparison to the same period of the previous year. Turnover for manufacturing plastic goods rose slightly by 0.2 %. In comparison to the previous year, the turnover was -0.5 % lower.

2 The primary plastics market - standard plastics

2.1 Standard plastics

In June, the standard plastics price index had average quotes of $1254 \notin t$, see Table 1. This reduction is solely due to the average price reduction of PS in the amount of $110 \notin t$. The quotes for all other plastics were unchanged. The reason given for the price fall was the sharp fall in styrene quotes. And this price drop triggered a boom in demand for PS plastics.

In a year-on-year comparison, it can be seen that the average quotes from June 2019 (1254 \in /t) were 103 \in /t lower than those of the previous year (1357 \in /t). Packaging PET was quoted at an average price of 1195 \in /t in June 2019, thus 65 \in /t lower than in the previous month. Orders from plastics processors were very subdued in July, with the exception of PS, because they are expecting sharp price drops in August. There is currently a large supply surplus. Furthermore, the demand for plastic should fall in the holiday season. Subdued purchases are due to the fact that future economic development is bleak.

Prices in €/t	June 2019	May 2019	April 2019	March 2019	Feb. 2019
LDPE film grade	1170- 1270	1170- 1270	1170- 1270	1150- 1250	1120- 1220
LLDPE film grade	1160- 1270	1160- 1270	1160- 1270	1140- 1250	1110- 1220
HDPE injection moulding	1260- 1320	1260- 1320	1260- 1320	1230- 1290	1200- 1260
HDPE blow mould- ing	1260- 1320	1260- 1320	1260- 1320	1230- 1290	1230- 1290
PS crystal clear	1340- 1400	1450- 1510	1450- 1510	1350- 1410	1290- 1350
PS high impact	1440- 1500	1550- 1610	1550- 1610	1450- 1510	1370- 1420
PP homopolymer	1370- 1440	1370- 1440	1370- 1440	1350- 1420	1330- 1390
PP copolymer	1420- 1490	1420- 1490	1420- 1490	1400- 1470	1380- 1440
PVC tube grade	860-920	860- 920	860- 920	850-910	840-900
PVC film/cables	910- 960	910- 960	910- 960	900- 950	890- 940
Average Price	1254 ± 199	1276 ± 222	1276 ± 222	1240 ± 201	1212 ± 189

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

2.2 Technical plastics

In June 2019 technical plastics $(2723 \notin t)$ were $13 \notin t$ lower than in April 2019 $(2736 \notin t)$, see. Table 2. The average price in June 2019 $(2723 \notin t)$ was as much as $300 \notin t$ lower than that of June in the previous year $(3023\notin t)$. Price falls were seen in June 2019 in: ABS -60 $\notin t$, PC -50 $\notin t$, POM - 25 $\notin t$, POM - 80 $\notin t$ and PA 66 - 88 $\notin t$. The price fall in ABS is due to the low quotes for styrene. The falling quotes in technical plastics go hand in hand deteriorating economy.

Prices in €/t	June 2019	April 2019	February 2019	December 2018
PMMA crystal clear	3200 - 3400	3200 – 3400	3330 – 3500	3400 - 3600
ABS natural	1610 – 1660	1670 – 1720	1650 – 1700	1670 – 1720
ABS w/b	1710 – 1760	1770 – 1820	1750 – 1800	1770 – 1820
ABS coloured	2310 – 2460	2370 – 2520	2350 - 2500	2370 – 2520
PC crystal clear	2950 - 3150	3000 - 3200	3150 – 3350	3250 - 3500
PC GF-reinforced	3150 – 3350	3200 - 3400	3350 - 3550	3450 - 3700
POM natural	1920 – 2020	2000 – 2100	2050 – 2100	2050 - 2150
PA 6 natural/black	2250 - 2450	2250 – 2450	2350 – 2550	2400 - 2600
PA 6 GF-reinforced	2350 - 2400	2350 – 2400	2450 - 2500	2500 - 2550
PA 66 natural	3950 – 4150	4050 – 4250	4200 - 4400	4200 - 4400
PA 66 GF-reinforced	3800 - 3900	3900 – 3950	4050 – 4100	4250 - 4300
Average Price	2723	2736	2850	2917

Table 2: EUWID quotes for technical prices, which are published every two months, over the last six months; prices in €/t.

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 July 2019; they will not become definitive until early August. The two quotes stated for July 2019 below indicate only an interim situation, see the left-hand column in Table 3 and Table 4.

3.1 Standard plastics:

In June 2019 the standard plastics were quoted at 520 \in /t and thus 28 \in /t lower than in the previous month, see Table 3. The average price for June 2019 (520 \in /t) was 32 \in /t below that of the previous year (552 \in /t). The following price changes were more than ± 40 \in /t: LDPE regranulate + 60 \in /t, PP bale goods +60 \in /t, PS regranulate -90 \in /t, PVC_U -50 \in /t and PVC_P -60 \in /t. AT 600 \in /t, HDPE regranulate is at a two-year high, whereas LDPE regranulate is at a two-year low at 520 \in /t. The June price index records lower demand for plastic in comparison with the previous month, which is due to holidays.

At 526 \in /t, the preview of the July quotes shows an average price that is roughly the same as in the previous month (520 \in /t). The July price index, 16.07.2019, shows continued subdued demand for plastic.

	July ⁶ 19	June 19	May 19	April 19	March 19	June 2018
HDPE regrind ¹	620	600	580	570	550	560
HDPE regranu- lates ⁵	850	860	890	870	890	880
LDPE bale goods ²	180*	230	250	210*	220	180*
LDPE regrind ¹	510*	520	580	550*	530*	640
LDPE regranu- lates ⁵	700	700	700	720	750	770
PP bale goods ³	210*	280*	220	160*	230	180
PP regrind ¹	590	600	600	590	580	640
PP regranulates ⁵	830	830	800	870	830	850

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

PS regrind ⁴	630	610	600	620	610	640
PS regranulates ⁵	900	930	1020	1080	980	950
PVC_P regrind ¹	370*	300	350*	370*	270*	470*
PVC_U regrind ¹	480*	430*	490	480*	390*	490*
PET bale goods	170*	200*	200*	170*	240	160*
PET regrind mixed colours	330	350	360	360	370	320
Average Price	(526)	520	548	544	531	552

*: 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 Technical plastics:

In June 2019 the average price for technical plastics in plasticker is $1256 \notin t$ and thus $26 \notin t$ higher than in the previous month $(1230 \notin t)$, see. Table 4. A comparison of the average prices from June 2019 ($1256 \notin t$) with those of the previous year ($1293 \notin t$) shows a current price that is $37 \notin t$ lower. The June price index reveals a slightly lower demand for plastic over the previous month. The following price changes were more than $\pm 70 \notin t$: PC regranulates $\pm 100 \notin t$, PBT regranulates $\pm 110 \notin t$ and POM regranulates $\pm 90 \notin t$. ABS regranulates are at an all-time low at $1150 \notin t$.

At 1247 \in /t, the preview of the July quotes of 16.07.2019 shows an average price that is only 9 \in /t lower. The July price index shows a slightly improved demand for plastics.

	July ⁶ 19	June 19	May 19	April 19	March	June 18
					19	
ABS regrind	680	690	700	680	660	710
ABS regranu-						1390
lates ⁵	1090	1150	1150	1230	1190	
PC regrind	910	880	780	790	850	980
PC regranulates ⁵	1900	1880	1870	1700	1950	1950
PBT regrind	490	490	490	460	450	490
PBT regranulates	1730	1710	1600	1700	1750	1750
PA 6 regrind	810	830	840	840	880	890
PA 6 regranu-						1880
lates ⁵	1900	1990	1920	1830	1890	
PA 6.6 regrind	870	850	880	950	910	910
PA 6.6 regranu-						2320
lates ⁵	2210	2260	2240	2470	2550	
POM regrind	580	600*	640	630	680	610
POM regranu-						1630
lates ⁵	1790	1740	1650	1900	1970	
Average Price	(1247)	1256	1230	1265	1311	1293

Table 4: Technical plastics price according to plasticker; listed in \notin/t .

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

4 Evaluation of the secondary plastic markets

4.1 Standard plastics

In June, the demand for plastic waste was assessed as subdued by EUWID and plasticker. In spite of a high level of supply, which is a result of the export ban in China, mainly lower

grades are offered on the markets. Queries to plastics recyclers to accept plastic waste are accumulating. The summer break started early this year, in mid-June. EUWID identified falling prices for film waste, quotes for all other commodities were unchanged. In the price index for plastic waste, June 2019, EUWID reported average price falls of 10 \in /t for film wastes, in this case PE post-industrial. The quotes for PE post-user film wastes were an average 23 \in /t lower.

There is continuing strong demand for commodities, for regranulates in particular. The strong demand for commodities is far from being met. The price falls for PS virgin grades are not yet being passed on to regranulates. Price falls of an average 28 €/t across all standard plastics could be seen in plasticker.

4.2 PET Recycling

The price falls for virgin grades are also being felt in PET recycling. In the summer months, the supply of used beverage bottles is pleasingly high. For this reason, price falls for the beverage bottles have mainly been implemented. The June quotes for used PET returnable bottles were 15 \in /t lower in comparison to the previous month, for PET mixed 25 \in /t lower and unchanged for PET coloured.

4.3 Technical plastics

In plasticker, the prices of technical plastics have been relatively stable for the last three months. Viewed over the long term, the quotes for technical plastics have been falling for seven months. With a view to the prices of new plastics, see PIE – Plastic Information Europe and EUWID, price falls have been identified over the last nine months. Technical plastics can currently be bought very cheaply.

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>, or in EUWID Plastics <u>www.euwid-kunststoff.de</u>. 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 <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