1 General economy with reference to the plastics industry

The monthly ifo business climate index gives a detailed picture of the current economic situation, cf. <u>www.ifo.de/ifo-geschaeftsklimaindex</u>. The ifo business climate index has fallen again in June 2019. The mood in German board rooms has cooled even more. In June, the ifo business climate index fell from 97.9 to 97.4 points. This is the lowest value since November 2014. Companies were increasingly pessimistic about the months ahead. By contrast, they assess their current situation as slightly better. The German economy is continuing to flag.

The business climate index fell again in the manufacturing sector. Although the index is still above its long-term mean value, it has now been falling for more than a year. The ray of hope concerning expectations from the previous month has disappeared. Pessimism among industrial companies rose again. This is mainly due to falling order volumes.

2 The primary plastics market -standard plastics

In April and May, the standard plastics price index had the same average quotes of 1276 €/t, cf. Tab. 1. In a year-on-year comparison, it can be seen that the average quotes from May 2019 (1276 €/t) were 34 €/t lower than those of the previous year (1310 €/t). Packaging PET was quoted at an average price of 1260 €/t in May 2019, thus 10 €/t lower than in the previous month. Orders from plastic processors were very subdued in May and June. Subdued purchases are due to the fact that future economic development is bleak. Besides, the processors already have full warehouses.

Prices in €/t	May 2019	April 2019	March 2019	Feb. 2019	Jan. 2019
LDPE film grade	1170- 1270	1170- 1270	1150- 1250	1120- 1220	1120- 1220
LLDPE film grade	1160- 1270	1160- 1270	1140- 1250	1110- 1220	1110- 1220
HDPE injection moulding	1260- 1320	1260- 1320	1230- 1290	1200- 1260	1200- 1260
HDPE blow mould- ing	1260- 1320	1260- 1320	1230- 1290	1230- 1290	1230- 1290
PS crystal clear	1450- 1510	1450- 1510	1350- 1410	1290- 1350	1270- 1320
PS high impact	1550- 1610	1550- 1610	1450- 1510	1370- 1420	1370- 1420
PP homopolymer	1370- 1440	1370- 1440	1350- 1420	1330- 1390	1330- 1390
PP copolymer	1420- 1490	1420- 1490	1400- 1470	1380- 1440	1380- 1440
PVC tube grade	860-920	860- 920	850-910	840-900	840-900
PVC film/cables	910- 960	910- 960	900- 950	890- 940	890- 940
Average Price	1276 ± 222	1276 ± 222	1240 ± 201	1212 ± 189	1207 ± 185

Table 1: Standard plastics prices according to EUWID over the past five months, listed in \notin /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 June 2019; they will not become definitive until early July. The two quotes stated for June 2019 below indicate only an interim situation, see the left-hand column in Table 2 and Table 3.

In May 2019 standard plastics were quoted at 548 \in /t. And this roughly corresponds to the previous month's quote of 544 \in /t, cf. Tab. 2. The average price for May 2019 (548 \in /t) was the same as that of the previous year (548 \in /t). The following price changes were more than \pm 40 \in /t: PP baled goods + 60 \in /t, PP regranulates -70 \in /taund PS regranulates -60 \in /t. The June price index records slightly better demand for plastic in comparison with the previous month.

At 520 \in /t, the preview of the June quotes shows an average price that is 28 \in /t lower than in the previous month (548 \in /t). The June price index, 17.06.2019, shows very subdued demand for plastic.

	June ⁶ 19	May 19	April 19	March 19	Feb. 19	May 18
HDPE regrind ¹	610	580	570	550	540	580
HDPE regranu- lates ⁵	870	890	870	890	840	840
LDPE bale goods ²	230	250	210*	220	180	270
LDPE regrind ¹	510	580	550*	530*	560*	610
LDPE regranu- lates⁵	690	700	720	750	690	740
PP bale goods ³	270*	220	160*	230	220	210
PP regrind ¹	590	600	590	580	560	530
PP regranulates ⁵	830	800	870	830	830	860
PS regrind ⁴	820	600	620	610	600	600
PS regranulates ⁵	900	1020	1080	980	900	900
PVC_P regrind ¹	180*	350*	370*	270*	250*	450
PVC_U regrind ¹	430*	490	480*	390*	390*	520*
PET bale goods	200*	200*	170*	240	190	220*
PET regrind mixed colours	350	360	360	370	380	340
Average Price	(520)	548	544	531	509	548

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

*: 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 May 2019 the average price for technical plastics in plasticker is $1230 \notin t$ and thus $35 \notin t$ lower than in the previous month ($1265 \notin t$), see. Table 3. And this represents price stability. A comparison of the average prices from May 2019 ($1230 \notin t$) with those of the previous year ($1264 \notin t$) shows a current price that is $34 \notin t$ lower. The June price index reveals a slightly improved demand for plastic over the previous month. The following price changes were more than $\pm 70 \notin t$: PC regranulates $\pm 170 \notin t$, PBT regranulates $\pm 100 \notin t$, PA 6 regranulates $\pm 90 \notin t$ and POM regranulates $\pm 250 \notin t$.

At 1264 €/t, the preview of the June quotes shows an average price that is 34 €/t higher. The June price index is also showing subdued demand for plastic.

	June ⁶ 19	May 19	April 19	March 19	Feb. 19	May 18
ABS regrind	690	700	680	660	630	710
ABS regranu-						1470
lates ⁵	1220	1150	1230	1190	1200	

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

PC regrind	860	780	790	850	970	860
PC regranulates ⁵	1820	1870	1700	1950	2000	2010
PBT regrind	490	490	460	450	550	430
PBT regranulates	1720	1600	1700	1750	1810	1630
PA 6 regrind	830	840	840	880	900	890
PA 6 regranu-						1860
lates ⁵	2020	1920	1830	1890	2030	
PA 6.6 regrind	840	880	950	910	910	940
PA 6.6 regranu-						2040
lates ⁵	2310	2240	2470	2550	2260	
POM regrind	640*	640	630	680	690	680
POM regranu-						1650
lates ⁵	1730	1650	1900	1970	2120	
Average Price	(1264)	1230	1265	1311	1339	1264

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

4 Evaluation of the secondary plastic markets

According to EUWID, the demand for plastic waste was assessed as subdued. plasticker also categorised May demand as subdued. In a comparison of the information for standard plastics from EUWID and plasticker, it can be seen that plasticker reported price stability for May 2019. Although EUWID reported only slight price rises from month to month for PE post-industrial and PE post user waste, this policy of small increments still leads to considerable price rises.

Plastic wastes

In the price index for plastic waste, May 2019, EUWID reported average price increases of $13 \notin t$ for PE post-industrial. Selected film grades, blow-moulded bodies and regrinds from crates were quoted very slightly higher. Here, there were average price rises of $5 \notin t$ to $15 \notin t$ in a total of 5 PE plastic types.

The pressure on PET recycling is growing. Firstly, this comprises the prices that can be achieved for used PET beverage bottles. The PET recyclers are trying to impose price reductions here. Price drops are clear for transparent and mixed bottles, whereas PET coloured was quoted as stable. The May quotes for used PET returnable bottles were 10 €/t lower in comparison to the previous month, for PET mixed 20 €/t lower and unchanged for PET coloured.

The boom in PET recycling is dying down. The downstream processors of rPET regrinds and rPET regranulates are thus trying to cut the prices. The fall in prices for virgin grades is also exerting pressure on recylate prices. The strong supply of virgin grades also influences recyclate prices. The prices achieved for regranulates are still stable in May, The transparent and coloured flakes had stable quotes in May. But there will probably be price drops in the June price index.

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

Bonn, Tuesday, 16. July 2019

Dr Thomas Probst, bvse