1 The primary plastics market

The mood in the German boardrooms has been developing positively in February and March, cf. www.cesifo-group.de. The ifo Business Climate Index rose from 109.9 to 111.1 points in February. The ifo index published in March 2017 also climbed from 111.1 to 112.3 points. This is the highest value since July 2011. The upward trend in assessing the current business situation is continuing without any interruption. Above and beyond this, company expectations have continued to improve. The upswing is gaining momentum. In the processing industry the index rose, too, reaching the highest value since July 2011. Price developments are showing a steady upward trend. The index rose in almost all important industrial sectors.

And what does this mean for plastics? At the press conference held by the German Association of the Plastics Converters (GKV) on Ash Wednesday 2017, it became clear that Germany's plastics processing industry reached a new record turnover in 2016, cf. www.gkv.de. The industry's turnover rose by 3.2 % last year, reaching 60.8 billion euros. GKV President Dirk E. O. Westerheide delivered a thoroughly positive summary of 2016. The industry companies' turnover developed very well. The number of employees in the plastics processing industry continued to rise, too, and has now attained 317,000.

1.1 **Standard plastics**: In February 2017 standard plastics prices reached the highest level in 18 months. The average prices of all standard plastics rose once again. Standard plastics were listed at 1384 €/t, i.e. an average 79 €/t higher than in the previous month, cf. Table 1. In February 2017, when they were quoted at 1384 €/t, average prices were 154 €/t higher than those in February 2016, which were listed at 1230 €/t. Price rises are explained by the increased precursor prices and the considerable demand for plastics. Above and beyond this, the prices of several plastic types were raised further. The marked price increase in PS, for its part, is explained by the price rise in its precursor. Polystyrene prices might even continue to rise markedly in the next few months. Another reason why the PS price developments are so surprising is that demand from the building and construction sector has been limited by the weather conditions in the first guarter. PP is reported to be in short supply. Packaging PET is listed at an average 1250 €/t and thus, 70 €/t higher than in the previous month. In the first quarter of 2017, demand for standard plastics has been considerable. Polyolefin commodities are expected to be short of supply because maintenance breaks are needed.

For a detailed analysis including information on price indices for virgin materials, used plastics and precursors, please refer to EUWID Recycling und Entsorgung (EUWID Recycling and Waste Management), cf. www.euwid.de, or to EUWID Kunststoff (EUWID Plastics), cf. www.euwid-kunststoff.de, and KI-Kunststoffinformation (KI Information on Plastics), cf. www.kiweb.de.

Table 1:	EUWID lis	stings for standa	rd plastics over	the past five mon	ths; prices in €/t.	

Prices in €/t	Feb. 2017	Jan. 2017	Dec. 2016	Nov. 2016	Oct. 2016
LDPE film grade	1390- 1500	1350- 1440	1310- 1410	1340- 1440	1340- 1440
LLDPE film grade	1360- 1460	1320- 1400	1280- 1370	1310- 1400	1310- 1410
HDPE injection moulding	1360- 1400	1320- 1360	1280- 1320	1330- 1370	1360- 1400
HDPE blow moulding	1380- 1420	1340- 1380	1300- 1340	1330- 1370	1360- 1400
PS crystal clear	1780- 1860	1570- 1620	1480- 1530	1330- 1380	1310- 1380
PS high impact	1870- 1960	1660- 1720	1570- 1630	1420- 1480	1400- 1480
PP homopolymer	1290- 1350	1230- 1290	1190- 1260	1220- 1290	1220- 1290
PP copolymer	1340- 1400	1280- 1340	1240- 1310	1270- 1340	1270- 1340
PVC tube grade	840- 890	820- 870	810- 850	830- 870	830- 860
PVC film/cables	890- 930	870- 910	850- 890	870- 910	870- 900
Average Prices	1384 ± 322	1305 ± 260	1261 ± 239	1249 ± 217	1259 ± 211

1.2 Technical plastics: In February 2017 technical plastics prices reached their highest level in 24 months. Technical plastics were listed at 2459 €/t, i.e. an average 133 €/t higher than in December 2016, cf. Table 2. A comparison of the average listings for February 2017 (2459 €/t) with those for February 2016 (2367 €/t) shows the price rise to be 92 €/t. The price changes for February 2017 are explained by the increased precursor prices. There are some isolated supply shortages in precursors. In some cases, considerable demand for technical plastics is offset by scarce supply in some isolated commodities.

Table 2:	EUWID listings for technical plastics, which are published every two months, over the past
	six months; prices in €/t

Prices in €/t	February 2017	Dec. 2016	October 2016	August 2016
PMMA crystal clear	2600 – 2800	2500 – 2600	2500 – 2600	2500 – 2550
ABS natural	1800 – 1900	1600 – 1750	1550 – 1720	1620 – 1820
ABS w/b	1900 – 1950	1700 – 1800	1650 – 1770	1720 – 1870
ABS mixed colours	2500 – 2700	2300 – 2550	2250 – 2520	2320 - 2620
PC crystal clear	3000 - 2850	2750 – 2850	2650 - 2800	2650 - 2800
PC GF reinforced	3200 - 3300	2950 - 3050	2950 - 3050	2900 - 3050
POM natural	1850 – 1950	1850 – 1950	1890 – 1990	1890 – 1990
PA 6 natural/black	2150 – 2400	1950 – 2170	2020 – 2170	2020 – 2170
PA 6 GF reinforced	2250 - 2350	2250 - 2350	2320 – 2420	2320 - 2420
PA 66 natural	2550 – 2700	2450 – 2600	2450 – 2600	2400 – 2600
PA 66 GF reinforced	2600 – 2800	2500 – 2700	2500 – 2700	2500 – 2700
Average Price	2459	2326	2329	2378

2 The secondary plastics market

Demand for primary plastics has been relatively high for both standard and technical plastics in March, too. Plastics prices have attained record highs. This should then give a boost to the secondary markets, too. The positive trend in virgin materials also applies to recyclates with a considerable time lag and, in addition to this, to a weaker extent. Neverthelss, spring is now having a slowly increasing impact on secondary plastics, too. Anyway, demand for recyclates is likely to ultimately rise further from April.

A comparison of the Plasticker Price Index for February 2017 with that for January 2017 shows that plastics markets were stagnating. Prices remained almost unchanged and demand was falling. Only as late as in March was a slight resurgence discernible on the plastics markets. In contrast to plasticker, EUWID reports for February 2017 indicate considerable demand for standard plastics and slightly rising prices. Regrind prices in particular rose by an average 20 €/t.

2.1 Waste plastics:

Overall, there is considerable supply of used plastics on national and European markets. High waste incineration prices have led to increasing quantities of plastics being sorted out. Above and beyond this, the stop on demand from China has led to large amounts of used plastics being available in domestic markets.

As far as mixed plastics are concerned, there are now higher quantities in the markets. However, these are increasingly poor quality. Overall, plastics separation has continued to deteriorate instead of improving - and that despite the manifold initiatives concerning quality control. Plastics recyclers are trying to find out to what exent it is necessary for them to

conduct additional sorting processes. Used plastics available abroad are often markedly higher quality than those being produced in the domestic market through sorting processes. Domestic quality grades are being critised for containing a large proportion of residual materials, a low concentration of polyolefins, high proportions of paper and high humidity levels. Waste plastics prices are listed with reservation subject to quality and quantity pressure.

Price rises of an average 10 €/t are discernible in post-industrial PE. The average price rise in post-user PE is 12 €/t. Post-industrial PP is listed an average 13 €/t higher. Post-industrial PS prices have risen by an average 16 €/t. Only PVC has held its own.

The Chinese New Year's celebrations, which were held on 28 January 2017, were over by mid-February. The boost in demand for goods from Europe, which was expected to occur afterwards, did not materialise because China launched a new Green Fence initiative aimed at putting a ban on illegal imports of used plastics. Imports from abroad are being subjected to tighter border checks in the import ports. An increasing number of containers are being scanned. Only high-quality waste plastics continue to be accepted. By now it is obvious that there is hardly any demand for contaminated film. Due to the low demand from abroad experts are expecting waste plastics prices to fall in the next few months.

Freight charges have risen, too, and transport regulations have been tightened. For example, it has become more difficult to obtain sea containers for exports to the Far East. The sea container price has been raised drastically. The changes in the AQSIQ licence renewal procedures show that licence extension is subject to more and more restrictions. This is why an increasing number of third-party licences are required for shipments to the Far East.

2.2 Recyclates:

There is sufficient demand for recyclates again. Recyclates are gaining importance as a stabilising factor for the primary markets. Above and beyond this, recyclates ensure supply security, and that independently of the primary market distortions in question. Recyclate prices are benefiting from the increased virgin material prices.

Polyolefin and PS regrind are listed 20 €/t higher, cf. EUWID. Regranulate prices may rise markedly, depending on their quality grade. It was interesting to note that the distortions in PP and PS led to part of these plastics being withdrawn from the recycling process. There is now higher demand for PP and PS recyclates again, and this has led to these partial markets resurging again. PVC shows hardly any fluctuation because there is still a lack of demand due to the winter season. PET markets are proving to be stable in respect of supply and demand. Recyclates are still selling well. The increased virgin material prices are stabilising PET markets for regrind and regranulates. It has been possible to raise the prices of used PET beverage bottles in this market.

3 The Plasticker Price Index

The plasticker internet platform, cf. 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 March 2017. These listings thus merely reflect an interim situation that does not become definitive until the beginning of April 2017. 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.

3.1 Standard plastics: In February 2017 the average price listed in plasticker changed only slightly compared to the previous month, cf. Table 3. Average prices rose by 9 €/t, reaching 536 €/t. The listings for February 2017 (536 €/t) were 55 €/t lower than those in February 2016 (591 €/t). In February 2017 turnover increased only slightly compared to the two

previous months. It should be noted in particular that PP bale goods reached the highest level in 48 months. The prices of LDPE bale goods, which rose by 50 €/t, and PET bale goods, which attained an additional 60 €/t, changed markedly.

A preview of the March listings, which cannot be definitively reported until the beginning of April 2017, shows the average price to be 26 €/t higher. In mid-March, on 13 March 2017, plastics markets were still restrained.

	Table 3: Listings for standard	d plastics in	plasticker:	prices in €/t.
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	March 2017 ⁶	Feb. 17	Jan. 17	Dec. 16	Nov. 16	Oct. 16	Febr. 16
HDPE regrind ¹	650	610	620	590	570	590	600
HDPE regranulates ⁵	930	950	920	820	840	860	970
LDPE bale goods ²	290	250	200*	220	240	210	270
LDPE regrind ¹	480*	510	550	570	620	580	900*
LDPE reganulates ⁵	740	730	720	780	800	870	770
PP bale goods ³	340*	330	290*	290	260	250	200
PP regrind ¹	550	530	530	500	520	540	600
PP regranulates ⁵	820	740	730	760	750	750	890
PS regrind ⁴	610	600	630	650	650	600	620
PS regranulates ⁵	890	880	880	880	880	900	1010
PVC_P regrind ¹	480	400	440	360	380	360	440
PVC_U regrind ¹	470	450	440	410	430	410	410
PET bale goods	150*	160	130*	180	190	110*	150*
PET regrind coloured	330	360	300	310	310	350	440
Average Price	(552)	536	527	523	531	527	591

^{*:} 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 that may be amended by additional quotes

3.2 Technical plastics: In February 2017 the average price of technical plastics in plasticker remained unchanged compared to the preceding month, cf. Table 4. A comparison of the average prices for February 2017 (1185 €/t) with those for February 2016 (1218 €/t) shows the current price to be 33 €/t lower. Marked price changes, i.e. by more than +/- 70 €/t, were descernible in PBT regranulates, whose price rose by 80 €/t, and in PA 6 regranulates, whose price fell by 80 €/t. In February demand for technical plastics was restrained.

The first preview of the March listings, which cannot be definitively reported until the beginning of April 2017, shows the average price to be 25 €/t higher than in the previous month. Up until 13 March 2017 the plasticker internet platform indicated restrained demand for technical plastics. According to the preview, the price of ABS regranulates will rise by as much as 200 €/t.

Table 4: Listings for technical plastics in plasticker; prices in €/t.

	March	Feb. 17	Jan. 17	Dec. 16	Nov. 16	Oct. 16	Feb. 16
	2017 ⁶						
ABS regrind	650	650	640	640	650	670	740
ABS regranulates ⁵	1540	1340	1290	1260	1320	1160	1350
PC regrind	850	830	860	900	830	860	1020
PC regranulates ⁵	1900	2020	1990	1980	1790	1790	1860
PBT regrind	530	530	480	460	430	470	490
PBT regranulates	1600	1540	1620	1510	1470	1350	1660
PA 6 regrind	890	850	870	870	870	860	930
PA 6 regranulates ⁵	1620	1600	1680	1610	1600	1390	1750
PA 6.6 regrind	960	940	880	910	860	850	1040
PA 6.6 regranulates ⁵	1680	1690	1730	1730	1720	1560	1780
POM regrind	700	620	620	610	560	580	550
POM regranulates ⁵	1600	1610	1540	1530	1650	1690	1440
Average Price	(1210)	1185	1183	1168	1146	1103	1218

⁵: Equivalent to the quality grade 'Regranulates, black'; ⁶: Preview that may be amended by additional quotes

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 tons. The monthly quotes for **secondary plastics**, 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** (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. 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

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