#### 1 The primary plastics market

The mood in the German boardrooms is excellent. The ifo Business Climate Index rose from 144.6 to 115.1 points in June, cf. <a href="www.cesifo-group.de">www.cesifo-group.de</a>. Thus the preceding month's record high was exceeded. Companies were, once again, markedly more satisfied with their current business situation. Moreover, they are expecting business to improve further. The upswing in the German economy is continuing. In the processing industry the index has risen slightly. The business situation has remained at a consistently high level. Industrial companies are taking a slightly more optimistic view on the next few months. Demand and order volume have been developing very favourably. The objectives set by production plans continue to ensure business expansion.

1.1 Standard plastics: In June, average standard plastics prices, which were listed at 1315 €/t, fell once again compared to the previous month, namely by 33 €/t, cf. Table 1. Except for PS, all standard plastics were quoted at lower prices. Fortunately enough, the 30 €/t rise in the PS price made up for part of the considerable loss incurred in May, amounting to 210 €/t. Average prices in June 2017, which were listed at 1315 €/t, almost equalled those in June 2016, which were quoted at 1312 €/t. Overall, demand for plastics was weaker in June 2017. Plastics processors, who speculated on prices falling in May, were lucky in June. Plastics processors are hoping for prices to fall further in July, too. Packaging PET was listed at an average 1170 €/t in June and thus, remained almost unchanged compared to the previous month, when it reached 1173 €/t.

Table 1:	<b>EUWID</b> listings for standard	plastics over the	past five months:	prices in €/t.

Prices in €/t	June 2017	May 2017	April 2017	Mach 2017	Feb. 2017
LDPE film grade	1350- 1460	1420- 1530	1440- 1550	1440- 1550	1390- 1500
LLDPE film grade	1300- 1400	1380- 1480	1420- 1520	1420- 1520	1360- 1460
HDPE injection moulding	1320- 1370	1380- 1430	1400- 1450	1400- 1450	1360- 1400
HDPE blow moulding	1340- 1390	1400- 1450	1420- 1470	1420- 1470	1380- 1420
PS crystal clear	1460- 1530	1430- 1500	1630- 1720	1860- 1950	1780- 1860
PS high impact	1560- 1630	1530- 1600	1730- 1820	1960- 2050	1870- 1960
PP homopolymer	1300- 1360	1350- 1410	1370- 1430	1350- 1410	1290- 1350
PP copolymer	1360- 1420	1410- 1470	1430- 1490	1410- 1470	1340- 1400
PVC tube grade	890- 940	900- 950	900- 950	890- 940	840- 890
PVC film/cables	940- 980	950- 990	950- 990	940- 980	890- 930
Average Price	1315 ± 212	1348 ± 214	1404 ± 264	1444 ± 334	1384 ± 322

**1.2 Technical plastics**: As reported by EUWID, technical plastics prices rose only slightly in June 2017: technical plastics were listed an average 2682 €/t higher and thus increased by 25 €/t compared to April 2017, when they reached 2657 €/t, cf. Table 2. Hence, technical plastics prices once again remained at the highest level in many years. However, the KI Kunststoff Information Price Index provides a slightly different picture. According to KI, the price level is falling. Overall, the KI Price Index has thus fallen by several points, but has none the less remained at a high level. According to KI, this shows clearly that technical plastics prices have passed their peak. This also becomes obvious if we take a closer look at the changes listed in the EUWID Price Watch: PMMA +325 €/t, ABS -200 €/t, PA 66 +225 €/t. PC, POM and PA 6 have held their own.

The price rises in June 2017 are explained by high demand, which is, in part, accompanied by low supply. The fall in precursor prices pushed the ensuing plastics prices down slightly.

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

Prices in €/t	June 2017	April 2017	February 2017	Dec. 2016
PMMA crystal clear	3050 - 3400	2800 – 3000	2600 – 2800	2500 – 2600
ABS natural	1800 – 1900	2000 – 2100	1800 – 1900	1600 – 1750
ABS white/black	1900 – 1950	2100 – 2150	1900 – 1950	1700 – 1800
ABS coloured	2500 – 2700	2700 – 2900	2500 – 2700	2300 – 2550
PC crystal clear	3200 - 3350	3200 - 3350	3000 – 3100	2750 – 2850
PC GF reinforced	3400 – 3650	3400 – 3500	3200 - 3300	2950 - 3050
POM natural	1900 – 2000	1900 – 2000	1850 – 1950	1850 – 1950
PA 6 natural/black	2350 – 2600	2350 – 2600	2150 – 2400	1950 – 2170
PA 6 GF reinforced	2450 – 2550	2450 – 2550	2250 - 2350	2250 - 2350
PA 66 natural	2950 - 3150	2750 – 2900	2550 – 2700	2450 – 2600
PA 66 GF reinforced	3000 - 3250	2800 – 3000	2600 – 2800	2500 – 2700
Average Price	2682	2657	2459	2326

#### 2 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 July 2017. These listings thus merely reflect an interim situation that will not become definitive until the beginning of August 2017.

**2.1 Standard plastics:** A twofold déjà-vu-experience occurred in June: the average price in plasticker remained unchanged compared to the previous month, cf. Table 3. Or to put it another way, plastics markets proved to be static for the fourth month in succession. And the listings for June 2017, reaching 549 €/t, equalled those in June 2016 (554 €/t). In June demand for plastics was restrained. Considerable price changes, i.e. changes by more than +/- 40 €/t, were reported in June 2017 for the following listings: HDPE regranulates, which rose by 50 €/t, and for PP regranulates, which increased by +60 €/t.

The preview of the July listings, which cannot be definitively reported until the beginning of August 2017, shows the average price to be slightly higher. In mid-July, as per 13 July 2017, demand for plastics was satisfactory to good on the plastics markets. There is considerable demand for HDPE regranulates, LDPE regrind and PS regrind. Demand for PET beverage bottles has risen, too.

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

	July	June 17	May 17	Apr. 2017	March 17	Feb. 17	June
	2017 <sup>6</sup>		_				2016
HDPE regrind <sup>1</sup>	570	580	590	590	620	610	610
HDPE regranulates <sup>5</sup>	940	880	930	950	930	950	920
LDPE bale goods <sup>2</sup>	270	250	290	270	270	250	240
LDPE regrind <sup>1</sup>	670	490*	490	480*	460*	510	730
LDPE regranulates <sup>5</sup>	800	780	800	840	740	730	820
PP bale goods <sup>3</sup>	220	260	220	240	320	330	160
PP regrind <sup>1</sup>	540	530	520	520	550	530	570
PP regranulates <sup>5</sup>	840	860	800	780	770	740	830
PS regrind <sup>4</sup>	630	600	620	610	620	600	630
PS regranulates <sup>5</sup>	960	980	960	860	940	880	880
PVC_P regrind <sup>1</sup>	350	450*	490	460	450	400	410
PVC_U regrind <sup>1</sup>	460	500	480	470	460	450	410
PET bale goods	170	180	180	190	200*	160	140
PET regrind	390	340	320	360	350	360	340
coloured							
Average Price	(558)	549	549	544	549	536	549

- \*: 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'; ⁵: preview that may be amended by additional quotes
- **2.2 Technical plastics**: Have technical plastics prices passed their peak? In June 2017 the average technical plastics price was listed 28 €/t lower than in the previous month, cf. Table 4. A comparison of the average prices for June 2017 (1305 €/t) with those for June 2016 (1163 €/t) shows the current price to be 142 €/t higher. Demand for technical plastics is satisfactory to good. Considerable changes, i.e. changes by more than 70 €/t, were reported in June 2017 for the following prices: PC regranulates, which fell by 230 €/t, PBT regranulates, which rose by + 100 €/t, PA 6 regrind, which increased by + 110 €/t and POM regranulates, which dropped by 270 €/t. The price rises in regranulates made from PBT and POM have been reversed.

The first preview of the July listings, which cannot be definitively reported until the beginning of August 2017, shows the average price to be almost unchanged. As per 13 June 2017, the plasticker internet platform showed satisfactory to good demand for technical plastics.

	July 2017 <sup>6</sup>	June 17	May 17	Apr. 17	March 17	Feb. 17	June 2016
ABS regrind	680	680	680	700	640	650	670
ABS regranulates <sup>5</sup>	1360	1370	1370	1370	1540	1340	1290
PC regrind	900	930	920	960	890	830	830
PC regranulates <sup>5</sup>	2200	2170	2400	2160	1960	2020	1870
PBT regrind	470	490	480	470	480	530	490
PBT regranulates	1790	1790	1690	1580	1600	1540	1620
PA 6 regrind	850	970	860	790	880	850	930
PA 6 regranulates <sup>5</sup>	1790	1840	1820	1760	1660	1600	1600
PA 6.6 regrind	820	890	870	900	940	940	870
PA 6.6 regranulates <sup>5</sup>	1770	1750	1760	1750	1670	1690	1760
POM regrind	770	750	750	650	680	620	590
POM regranulates <sup>5</sup>	2200	2130	2400	2250	2060	1610	1430
Average Price	(1300)	1305	1333	1278	1250	1185	1163

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

### 3 The secondary plastics markets

A comparison of the information given by EUWID and plasticker for June 2017 shows that EUWID lists price rises of  $5 \in /t$  to  $25 \in /t$  for some isolated plastics grades in its Price Watch for used plastics. The prices of 15 out of the total of 36 plastics listed has been increased. However, according to plasticker the June prices for standard plastics remained unchanged, with demand for plastics being relatively restrained. Demand for technical plastics was satisfactory to good according to plasticker. The prices of recyclates made from technical plastics are at record highs, even though they have been falling slightly. It should be noted that the prices listed for waste plastics in EUWID and plasticker only apply where the agreed quality specifications are met.

Imports and exports: The markets for waste plastics have met with turmoil all across the world. What people feared for a long time has now become a reality: from next year China intends to drastically reduce waste imports and to put a ban on a large number of them. In mid-July the Chinese government informed the World Trade Organization (WTO) of the ban on imports planned. 24 types of waste, including used plastics from PET, PVC, PE and PS, are affected. From China's point of view, the country is forced to take this measure because the amount of considerably contaminated, hazardous and unusable waste imported has been rising more and more. Last year China imported approximately 7.3 million tonnes of waste plastics worth US \$ 3.7 billion US dollars from the USA, Japan and Europe.

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

What has happened up to now? The import restrictions imposed by the People's Republic of China, i.e. what is commonly termed 'Green Fence Policy', have been in place since 2007, and these have been updated in each of the subsequent five annual plans. The import restrictions have been implemented with varying degrees of intensity. Thus, they have been observed to be loosened and then re-tightened again on several occasions. For several years, China has gradually reinforced the restrictions announced. For example, container consignments have to be documented by taking photos in a specific way. Above and beyond this, the checks on containers in China's import harbours have been tightened. The number of AQSIQ licences issued has been reduced more and more. And the 'Chinese National Sword' campaign, which was first announced in early 2016, will be implemented in 2017. In July, one of the key campaigns has led, among other things, to China's recycling companies being investigated. Illegal waste material imports have been drastically combated for many years.

#### 3.1 Waste plastics - a difficult situation:

In Germany, large waste plastics supply is matched by low outflow into the downstream processing and recycling industries. Recyclers are only accepting the highest-quality grades. Thin film can neither be sold on a national nor on a European nor on a global scale. Depending on its quality, film is, in part, only accepted where additional payments are made. The amount of post-user waste materials being accepted is very low, too. Post-user waste finds its way into the recycling industry only where the agreed quality specifications are met.

Post-industrial waste is still in demand. Recyclers are looking for high-quality waste plastics from HDPE, PP and PS. Even transparent PET beverage bottles are finding their way into the recycling industry; the amount of coloured PET being accepted is low.

#### 3.2 Recyclates and products:

There is considerable demand for regrind and regranulates from HDPE, PP and PS in the plastics processing industry. However, these plastic types have to meet the quality requirements imposed by this sector. The sale of plastics products used for building construction and civil engineering, gardening and landscaping or water installations is benefiting from the considerable domestic demand. Demand from Eastern Europe for pipes used in the area of building construction has subsided. In the Middle East, companies are interested in using, for example, grass pavers, equestrian surfaces, water retention systems or floor fixings made of plastics recyclates.

As far as technical plastics are concerned, there is considerable demand for regrind, regranulates and compounds. The changes in virgin material prices are having an impact on recyclate prices, whose development is following that of primary materials with a certain time lag.

Transparent PET recyclates are selling well in the markets. There is considerable demand for transparent PET beverage bottles. PET recyclers are looking forward to the summer season, during which beverage bottle supplies are likely to rise further. Used and transparent PET beverage bottles are attaining higher prices. In June, the price listed for transparent PET rose by 10 €/t, while coloured PET held its own.

### 4 Explanatory information on 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="https://www.euwid.de">www.euwid.de</a>, or EUWID Plastics, <a href="https://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.

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