1 General economy and reference to the plastics industry

The current situation of the plastics industry, including plastics recycling, is shown excellently in the PIE Dialogues. The current PIE Dialogue has published its results from the 47th survey on the economy in the plastics sector, see https://www.kiweb.de. The Executive Summary of the Dialogue states: "In the summer of 2024, hope and fear are still very close neighbours in the plastics industry: hope that the economy will take off soon and push demand up. Fear that the lean period could drag on well into 2025. These mixed emotions characterise the results of the 47th economic survey by Plastics Information Europe."

Then, PIE Dialogue asked the question: "What challenges are facing the plastics industry in the first half of 2024 – and what is it expecting in the second half of the year?" This question can be answered easily and clearly. Headache number one was, is and remains quantities sold. Above all, machine constructors and recyclers are suffering from a spectacular and almost existential slump in demand. A lack of orders is the biggest business problem for 94 % of machine constructors. Recyclers (87.5 %) and distributors (75 %) are no less affected. But, two thirds of all plastics processing operations (66 %) complain about a shortage of orders and/or requests.

2 Primary markets - standard plastics

The price of standard plastics continued to fall. Provision with virgin grade is good, but there is still a lack of demand in many sectors. The experts report that the packagings sector has recovered. The supply of plastics is also controlled by capacity reductions among crackers and polymerisation. The brief surge in demand caused by the European Championships has come to an end. The summer holidays have started in some federal states. Or, in other words: the summer slowdown has started. The price drop for standard plastics has not yet ended.

In June 2024, the EUWID average price of 1,444 $\$ /t was therefore 29 $\$ /t lower than in the previous month (1,473 $\$ /t), see Tab. 2. In a year-on-year comparison, it can be seen that the average quotes from June 2024 (1,444 $\$ /t) were 47 $\$ /t higher than those of the previous year (1,397 $\$ /t).

The plastic quotes changed on average as follows: LDPE by -55 €/t, LLDPE by -45 €/t, HDPE by -35 €/t, PP by -40 €/t, PS by -30 €/t and PVC by -20 €/t. The current market situation for standard plastics is portrayed well in EUWID, see <u>www.euwid-recycling.de</u>, and PIE – Plastic Information Europe, see <u>https://pieweb.plasteurope.com/</u>.

Tabl	e 2:	Standard plastics prices acc	ording to EUWID ove	er the past five months, listed in ϵ	/t.
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Prices in €/t	June 2024	May 2024	April 2024	March 2024	Feb. 2024
LDPE film grade	1250- 1350	1320- 1390	1340- 1420	1340- 1440	1310- 1390
LLDPE film grade	1260- 1330	1310- 1370	1330- 1420	1330- 1420	1300- 1370
HDPE injection moulding	1290- 1320	1320- 1360	1340- 1400	1350- 1410	1300- 1360
HDPE blow moulding	1280- 1330	1310- 1370	1330- 1410	1340- 1420	1290- 1370
PS crystal clear	1850- 1910	1880- 1940	1990- 2050	1950- 2030	1750- 1830
PS high impact	1980- 2010	2010- 2040	2120- 2150	2080- 2130	1880- 1930
PP homopolymer	1390- 1510	1430- 1550	1450- 1580	1430- 1530	1380- 1460
PP copolymer	1440- 1560	1480- 1600	1500- 1630	1480- 1580	1430- 1510
PVC tube grade	1060- 1160	1080- 1180	1090- 1190	1070- 1170	1060- 1160
PVC film/cables	1190- 1290	1210- 1310	1220- 1320	1200- 1300	1190- 1290
Average Price	1444 ± 281	1473 ± 280	1514 ± 315	1500 ± 306	1428 ± 240

PET: The European PET markets are continuing to stabilise. Imports from the Far East are still late or missing. The demand for PET is rising markedly due to the warmer temperatures in the summer. The heatwaves in southern and eastern Europe with temperatures of up to 40 °C are leading to strong demand for drinks. And no end to the European heatwave is in sight.

The hype around "tethered caps" is highly amusing. Tethered caps are those PO bottle caps that are connected to the beverage bottle by a plastic loop. The rejection of this new closure system is growing constantly. There are many commentaries and films on this subject on the internet – some of which have become legendary.

In June 2024 packaging PET was quoted on average at 1,285 €/t. And thus 20 €/t higher than in the previous month, see PIE – Plastic Information Europe https://pieweb.plasteurope.com/.

3 Secondary plastics markets in the plasticker price index

The plasticker internet platform, see 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 July 2024; they will not become definitive until early August 2024. The two quotes stated for July 2024 below indicate only an interim situation, see the left-hand column in Table 3 and Table 4.

3.1 plasticker: Standard plastics

Price stability for secondary plastics. In June 2024, standard plastics were quoted at an average price of 628 $\ensuremath{\in}$ /t and thus only 7 $\ensuremath{\in}$ /t higher than in the previous month (621 $\ensuremath{\in}$ /t), see Tab. 3. The average price for June 2024 (628 $\ensuremath{\in}$ /t) was only 9 $\ensuremath{\in}$ /t above that of the previous year (619 $\ensuremath{\in}$ /t). The June price index showed improved demand in comparison to the previous month.

There were significant price changes of greater than ±40 €/t for: HDPE regrind -70 €/t, LDPE regrind +70 €/t, h_PV regrind +180 €/t and PET regrind mixed colours +110 €/t. Those price changes for which supply figures were too low (*) for statistical significance are not included here.

The probable average price in June 2024 (618 €/t) is therefore 10 €/t lower than the previous month (628 €/t), see Tab. 3. The price index of 12.07.2024 shows worse demand in comparison to the previous month.

rable 3. Stariu	Table 3: Standard plastics price according to plasticker; listed in €/t.							
	July ⁶ 24	June 24	May 24	April 24	March 24	June 23		
HDPE regrind ¹	580	570	640	620	620	670		
HDPE regranulates⁵	940	960	960	980	960	880		
LDPE bale goods ²	440*	480*	570*	280*	390	370*		
LDPE regrind ¹	520*	500	430*	410	570*	180*		
LDPE regranulates ⁵	760	820	790	860	810	800		
PP bale goods ³	180	210	180	210	310	230*		
PP regrind ¹	550	580	580	630	660	740		
PP regranulates ⁵	980	880	890	920	900	1020		
PS regrind ⁴	740*	760	760	760	710	710*		
PS regranulates⁵	960	890	850	820	890	1130		
PVC_P regrind ¹	790*	740*	860*	870*	420*	570*		
PVC_U regrind ¹	590	660	480*	480*	480	580*		

320*

320*

380*

300*

240*

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

190*

PET bale goods

PET regrind mixed colours	430*	500	390	370	550	480
Average Price	(618)	628	621	609	618	619

^{*:} 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 (may be amended by additional quotes)

3.2 plasticker: Technical plastics

Price stability for technical plastics. For June 2024, there was an average price of 1,629 €/t, which was 34 €/t higher than that of the previous month (1,595 €/t), see Table 4. However, the average price for June 2024 (1,629 €/t) was 132 €/t below that of the previous year (1,761 €/t).

There were significant price changes of greater than ±70 €/t for: PC regrind +100 €/t, PC regranulates +370 €/t, PBT regranulates +160 €/t, PA 6 regranulates +190 €/t, PA 6.6 regranulates -250 €/t, POM regrind -120 €/ and POM regranulates +160 €/. The June price index is characterised by slightly improved demand.

The probable average price in July 2024 (1,604 €/t) is thus 25 €/t lower than in the previous month (1,629 €/t). The price index of 12.07.2024 shows subdued demand for plastic.

Table 4:	Technical r	lastics n	rice accor	ding to	nlasticker [.]	listed in €/t.
Table 4.	i ecililicai p	nastics p	ille accor	unig to	piastickei,	moteum e/t.

	July⁵ 24	June 24	May 24	April 24	March 24	June 23
ABS regrind	650	700	680	710	750	870
ABS regranulates ⁵	1360	1390	1420	1390	1460	1570
PC regrind	950	1010	1110	1140	1250	1210
PC regranulates⁵	2720	2480	2110	2110	2170	2120
PBT regrind	710	740	770	840	790	750*
PBT regranulates	2240	2160	2000	2020	2310	2200
PA 6 regrind	900*	820	780	700	930	1050
PA 6 regranulates ⁵	2440	2480	2290	2320	2380	2630
PA 6.6 regrind	1010	940	960*	1010	1030	1390
PA 6.6 regranu- lates⁵	2660	2770	3020	2920	2900	3570
POM regrind	690*	740*	850	870*	860	760
POM regranulates ⁵	2920	3320	3160	2740	2680	3010
Average Price	(1604)	1629	1595	1564	1626	1761

^{*:} Supply figure too low to attain statistical significance; 5. equivalent to the grade "regranulates, black"; 6. preview (may be amended by additional quotes)

4 Secondary plastics markets

At the 26th International Conference on Plastic Recycling, 11/12 June 2021 in Dresden, it was reported that plastics recycling is still in a critical situation. Critical situations and thorny issues are also published to draw stakeholders' attention to them and to find ways out of the crisis. The market report in EUWID RE 28, 2024, p. 22, titled "The Waste Plastics Market is in a Deep Crisis" deals with the crisis in plastics recycling in depth.

EUWID RE 27, 2024, p. 3 reports in detail on the PRSE Podium Discussion on Plastics Recycling at the Plastic Recycling Show Europe, 19/20 June 2024 in Amsterdam: "The European market for plastic recyclates is currently undergoing an extended lean phase, characterised by volatility, a low price level

and fierce competition. It is probable that little will change in the months ahead". And more: "In the short term, we expect the situation to become more acute, with increasing market consolidation," this is the assessment of Tom Hesselink Partner Transaction Services and Private Equity at the Simon Kucher consultancy.

But the longer-term prospects are definitely positive. Before 2030 Hesselink expect that there could be a demand surplus for high-quality post-consumer recyclates. (...) "The phase from 2024 to 2030, however, is initially characterised by uncertainties."

During the talks in the breaks at the International Conference on Plastic Recycling, one recycler complained very loudly about the organiser's gloomy description of the situation. Alas, the good news concerning PET recycling was probably missed. And the chance to classify PS regranulates as foodsafe, if interested parties were finally to come together on this, has also not been met with a reaction yet. Or, in other words: crises also present opportunities — opportunities for change.

4.1 Recycling standard plastics

EUWID plastic wastes, in this case bale goods: The June price index for waste plastics in Germany is showing a mixed trend for film wastes, see www.euwid-recycling.de. The PE film bale goods from post user waste recorded price rises, which were between 5 €/t and 20 €/t on average. LDPE film grade from production also increased by between 5 €/t and 10 €/t on average. Only PP film was quoted between 5 €/t and 15 €/t lower on average. Overall, however, there was demand for good film qualities from Germany and Europe all over the world. Film volumes in Germany have still not stabilised.

EUWID, regrinds: In June, regrinds were quoted lower. The average price falls for PE post user were between $8 \notin /t$ and $30 \notin /t$. As far as PE production waste is concerned, the average price falls were 25 \notin /t , $14 \notin /t$ for PP, $14 \notin /t$ for PVC and $16 \notin /t$ for PS.

plasticker: The quotes for standard plastics indicate price stability for June, albeit with low sales; the summer break is around the corner. We will have to wait until after the summer break to see whether the average price in June of 628 €/t can be maintained for longer.

PIE – Plastic Information Europe, regranulates: In PIE – Plastic Information Europe the regranulates were quoted lower in June 2024. The premium grades of regranulates quoted here record average price falls of $5 \notin t$ to $30 \notin t$, averaged over all grades, see https://pieweb.plasteurope.com/.

4.2 Recycling technical plastics

PIE – Plastic Information Europe and plasticker report the same trends: subdued demand, start of the summer break, economic downturns, consolidation of prices with low sales, opportunities in niche areas.

plasticker: Recyclates, in this case regrinds and regranulates, were quoted 34 € higher in June. The June price index is characterised by only slightly improved demand for plastic in comparison to the previous month.

PIE – Plastic Information Europe, regranulates: In PIE – Plastic Information Europe, too, the regranulates were quoted slightly higher in June 2024. The premium grades of regranulates quoted here recorded only slight average price rises in the range of 10 €/t to 20 €/t, see https://pieweb.plasteurope.com/. The markets with their demand and prices have stabilised at a low level; there is no market impetus.

4.3 PET recycling

The PET markets in June: The volumes of used PET bottles have greatly improved; on the one hand due to the European Football Championships and, on the other, due to the raised temperatures in the holiday season. And demand for PET flakes and PET regranulates is rising.

Due to the increasing supply in Germany and in the European Single Market, bottle prices are remaining unchanged for the time being. For PET recyclers, there is sufficient input of beverage bottles. Import delays are advancing the EU market. Freight rates are also high. In June 2024, there were no price changes for used PET single-use deposit bottles in comparison to the previous month, see EU-WID

For virgin grade, in this case granulates, the average value in PIE – Plastic Information Europe is 1,285 €/t. Regranulates are valued at 1,555 €/ in PIE – Plastic Information Europe. Clear flakes are priced at 1,270 €/t in PIE – Plastic Information Europe and 1,260 €/t in EUWID.

Detailed monthly reports on the PET prices for virgin grade and used beverage bottles can be found in EUWID and PIE - Plastics Information Europe.

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 www.euwid.de. EUWID: No guarantee for any of the prices here; 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 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. 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

A detailed discussion with information of price indices for virgin grades and waste plastics as well as precursor products can be found in PIE – Plastics Information Europe, see www.kiweb.de. For virgin grades, the indices for standard plastics (Plastixx ST) and technical plastics (Plastixx TT) provide a good overview of the price trends. Pieweb quotes the monthly regranulates prices for standard plastics and technical plastics in the secondary markets. For secondary plastics, there are also details on PET, in this case flakes (flakes transparent, flakes mixed colours) as well as transparent regranulates.

Bonn, Tuesday, 30. July 2024

Dr. Thomas Probst, byse