

price

know-how

January 2013

Why have benzene prices increased and what impact will this have on polymer prices?

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Welcome to price know-how

A monthly publication looking at key factors that affects UK polymer markets.

The concept of a user friendly market report came from feedback about an article published in PRW (Plastics & Rubber Weekly) about the 2011 market outlook to which Plastribution made a significant contribution.

Whilst some price surveys currently exist they are often difficult to interpret, use foreign currencies, and differing units of measure. Price know-how aims to be relevant by providing an overview, material group specific reports and more general economic information including exchange rates and GDP growth.

To keep things relevant the report is in £ Sterling with tonnes as the common unit of measure.

The objective of the report is to form the basis of discussion about issues such as pricing and availability and so be a basis on which to consider purchasing strategies.

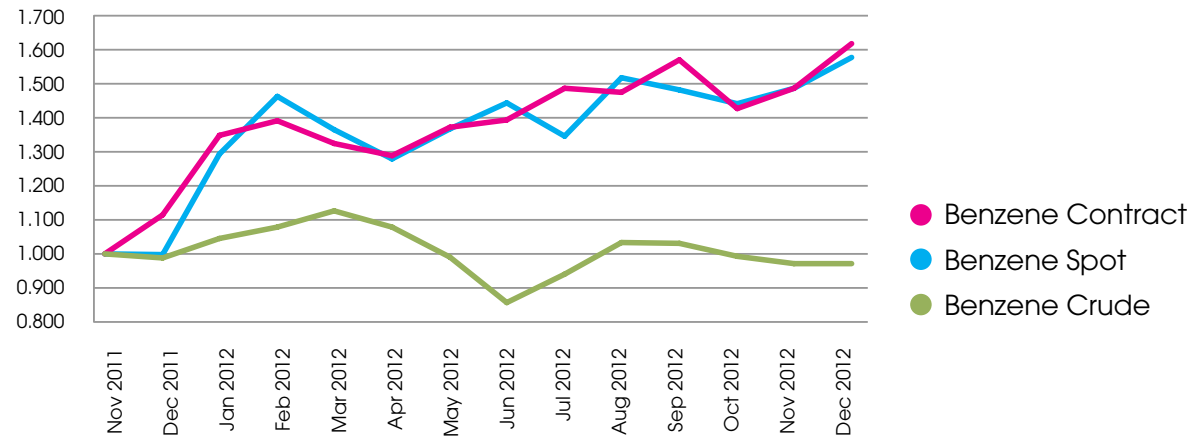
It is also believed that the report will support customers in explaining polymer price trends to their own customers, employees and shareholders.

As always we would welcome your feedback, and as ever your sales team is available to discuss your specific requirements.

The Plastribution Team

Why have benzene prices increased and what impact will this have on polymer prices?

Index of Benzene vs. Brent Crude



The graph clearly illustrates the relative increase of benzene costs versus crude oil.

This rise is an interesting consequence of the increasing use of gas as both a source of energy and petrochemical production. As benzene is a by-product of the oil refining process, the increased use of natural gas is reducing availability, and hence prices are going up.

Given that so far the shale gas revolution in the US has had quite limited impact on polymer production, the availability of benzene looks set

to tighten further as the US polymer industry starts to commission significant polyolefin production capacity utilizing shale gas as the feedstock.

Benzene is a key feedstock in all styrenic polymers, including polystyrene and ABS, polycarbonate and Nylons. Hence, it is likely that the producers of these polymers will seek to inflate selling prices in order to recoup increased feedstock costs.

Why have benzene prices increased and what impact will this have on polymer prices?

GBP vs. Euro



On a more general note, the recent weakness of Sterling against the Euro is a matter of quite serious concern, given that UK polymer prices are predominantly Euro denominated. The current slip of about 5 Euro cents equates to an increase of about £60 per tonne for standard polyethylene and polypropylene grades.

To some extent this inflationary factor is being mitigated by the increased strength of the Euro against the USD, which is effectively driving down the cost of crude oil and other USD denominated feedstocks.

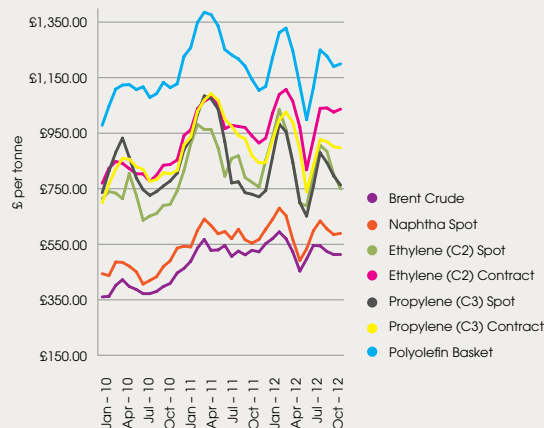
Monomer Prices (£ GBP per tonne)

Data provided by PIE www.pieweb.com

Feedstock	Change (Contract)
C2 (Ethylene)	£0.00
C3 (Propylene)	-£10.56
Styrene	£48.73
Benzene	£56.04
Brent Crude	-£0.43

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Polyolefins

Data provided by PIE
www.pieweb.com



→ Supply
↘ Demand

LDPE

January has started with fairly low demand, and even the monomer price increase and subsequent polymer price increases have done little to perk up the appetite of buyers.

In many cases, converters are using stocks carried forward from 2012 and monitoring how the market evolves before placing orders.

→ Supply
↘ Demand

LLDPE

Although supply has been reduced by virtue of both lower imports from the Middle East and reduced operating rates for European producers, there is sufficient material about at low prices to meet with current demand, and as such prices have not moved forward as expected.

→ Supply
↘ Demand

HDPE

The HDPE market has got off to a quiet start in 2013. Many converters carried inventory forward from December and have adopted a piecemeal 'wait and see' approach to purchasing replacement supplies. Although a significant planned plant outage is likely to play into the producers' hands and tighten the market considerably.

→ Supply
↗ Demand

PP

Although the C3 price rolled over from December to January, it looks as if the fundamentals of the PP market finally swung back into the producers favour and a moderate price hike has helped to improve margins.

The outlook is for the market to continue to tighten throughout Q1.

Other Polyolefins

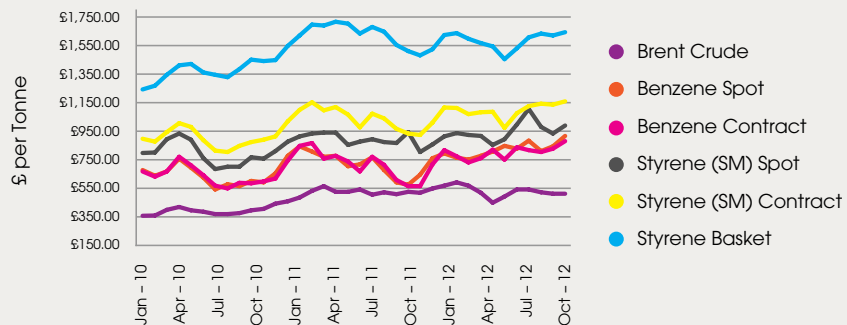
The EVA market appears to be finely balanced, and a combination of price increases and availability issues for VAM may be enough to push the market prices back into an upwards direction.

mPE producers will continue to promote the advantage of the higher performance of these grades to offset increases through down-gauging and increased operating rates. New entrants to the market are likely to increase market penetration of these high performance materials.

Plastomers continue to follow the monomer price trend.

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Styrenics

Data provided by PIE
www.pieweb.com



Supply
Demand

PS

As outlined at the start of this edition of price know-how, the pressure of high benzene costs is being directly reflected in the price of styrene monomer. With already poor profitability, polystyrene producers are taking a strong stand on pricing.

Softer Butadiene prices are starting to influence the premium of HIPS over GPPS, which may reduce a little pressure from the price of ABS as a substitute material in some applications.

Supply
Demand

ABS

Whilst SM (styrene monomer) derived from benzene was a significant cost pressure for ABS producers, these increases were almost entirely offset by the fall in ACN (Acrylonitrile) and Butadiene costs.

However, in recent days the price of Butadiene has started to increase and price increases for ABS are now being strongly rumoured.

Supply
Demand

PC/ABS

Following recent forecasts from the large European automotive OEMs, it now looks as if demand in the coming months is likely to dip significantly.

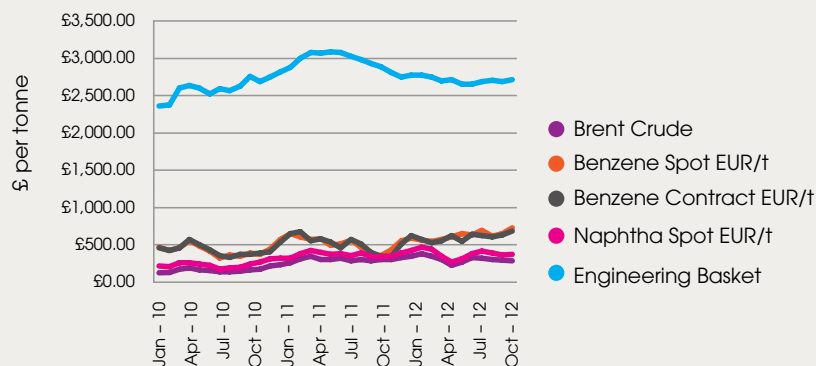
As other markets remain quiet, it looks as if lead times will reduce, and with that downward price pressure will continue to apply.

Other Styrenics

SAN and specialities such as ASA and SMMA continue to follow the price trend of styrene monomer.

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↗ Supply
↘ Demand

PA6

The market for PA6 continues to look challenging. So far, supply is easily outstripping demand.

Whilst this situation continues, the influence of Benzene costs is unlikely to be felt.

↗ Supply
↘ Demand

PA66

The situation is similar to PA6, although so far the cost increase of Benzene has to some extent been mitigated by the price reductions for Butadiene.

But with a recent turnaround in Butadiene costs, it looks as if PA66 producers will soon be asking for price increases.

↗ Supply
↘ Demand

POM

The POM market is very stable, a situation that is helped by low and stable pricing of the feedstock Methanol.

Producers appear happy not to disturb the status quo, and the supply/demand balance is going to be a key factor in maintaining this situation going forward.

↗ Supply
↘ Demand

PC

The announcements of significant price increases last year were reflective of the difficulties of being a PC producer.

Not only do producers face the cost pressures of Benzene, but also the declining demand for optical grades used in CD & DVD manufacture which continue to increase competition in the extrusion and injection mould segments.

The situation has now reached crisis level with producers starting to turn off capacity rather than suffer operating losses. This drastic action will of course result in an eventual return to a more favourable market, fundamental for PC producers.

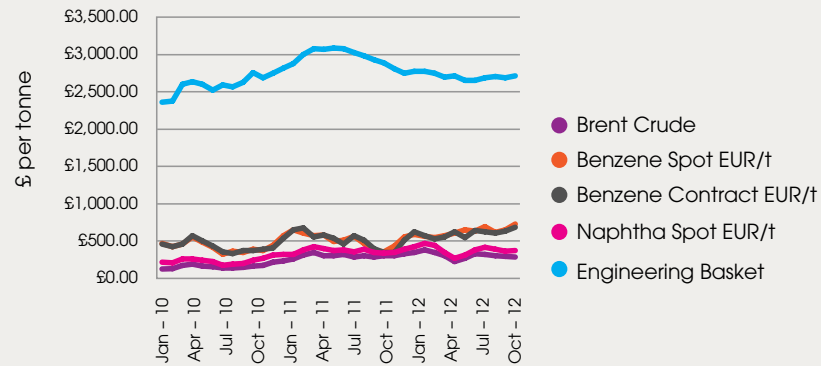
↗ Supply
↘ Demand

PMMA

The situation on PMMA looks quite stable. Already Asian producers have trimmed production to reflect weaker demand, and so it is unlikely that imports will have any significant influence.

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Data provided by PIE
www.pieweb.com



↗ Supply
↘ Demand

PBT/PET

This is another market that looks quite stable. Again, high feedstock prices are causing concern for producers and discouraging any serious attempts to win market share based on discounted pricing.

→ Supply
→ Demand

PPS

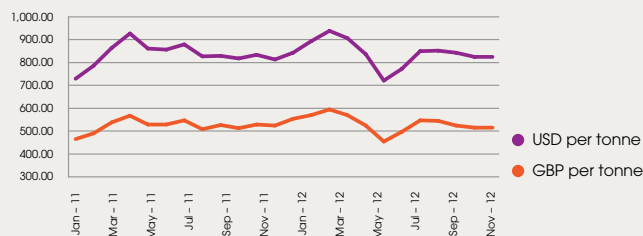
The situation on remains stable.

Other Engineering Polymers

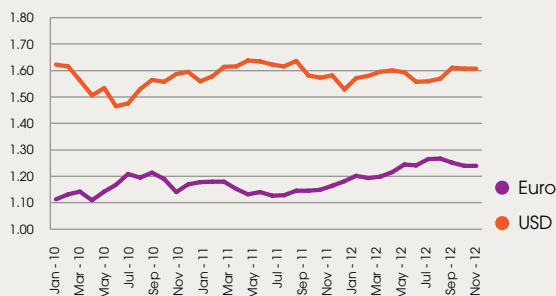
The increase in feedstock costs will create upward pressure on prices, and increases are either in progress or will be implemented in the coming months.

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Fundamentals

Brent Crude Oil Price per tonne



Exchange Rates



UK Economic Data

Topic	Item	Date	%	Trend
GDP	Real GDP (Q on Q)	Q3 2012	0.8	⬆️
GDP	Real GDP (Y on Y)	Q3 2012	2.8	↻
UK Output	Manufacturing (M on M)	Oct	-1.3	⬇️
UK Output	Manufacturing (Y on Y)	Oct	-1.8	⬇️
Sales	New Car Registrations (Y on Y)	Nov	9.7	↻
Sales	Retail Sales (M on M)	Nov	0.0	↻
Labour	Unemployment Rate	Sep	7.8	⬇️
Prices	CPI (Y on Y)	Oct	2.7	➡️
Prices	RPI (YoY)	Oct	3.0	➡️
Interest Rate	Bank of England Base Rate	Jan	0.5	➡️

In GBP terms, oil prices have fallen quite significantly until the end of June, but since the beginning of July prices have rallied (see introduction). Subject to this trend on oil prices continuing, there will be pressure for price increases across the whole spectrum of petrochemical products, including polymers.

The Sterling/Euro exchange rate is a key factor in determining polymer prices, since most materials are Euro denominated. At current price levels, each Euro Cent change in price represents a £10 per tonne impact on our polyolefins materials basket.

The Sterling/USD exchange rate tends to be more influential on the price of ABS, PC and POM. Significant imports from Asia and weakness of the Euro is placing pressure on raw material imports such as crude oil into the Eurozone, and is making sales to Asia look relatively more attractive.

Whilst a weak Stirling increases competitiveness of exports from the UK, it also causes inflation on imported goods, including plastic raw materials. Sterling has recently strengthened against the dollar and weakened against the Euro. At the same time, the Euro has strengthened significantly against the dollar. Given that both crude oil and feedstocks are priced in dollars, this is deflationary pressure helping to mitigate the effects of rising oil prices.

Methodology

This report is produced based upon the following fundamentals: -

- EURO based pricing for feedstock and polymer pricing
- Conversion of Euro and USD based prices at prevailing exchange rates
- Product baskets weighted according to UK consumption

Acknowledgements

We would like to thank the following organisations for their support in producing this report: -



PIE (Plastics Information Europe) www.pieweb.com

HM Treasury www.hm-treasury.gov.uk

Disclaimers

The information provided in this report are based upon data available from both external and internal sources, and whilst care is exercised in producing this report we give no guarantee of accuracy.

Furthermore we accept no liability for purchasing decisions based upon the information provided as the petrochemical market is complex and volatile.

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