know-how

December 2015

Oil Price Down, Monomer Prices Stable or Increasing, Polyolefin and Polystyrene Prices Increasing – Supply/Demand Fundamentals Continue to Define the Markets.





Introducing 'Understanding the Polymer Supply Chain'.

A brand new course from Plastribution.

We have worked closely with G&A moulding technology in Peterborough developing two courses:-

The first is a process optimisation course aimed at technicians and tool setters. It is aimed to improve their understanding of the moulding process, leading to improvements in quality and productivity, the second is aimed at people in commercial roles with little experience of polymers and the injection moulding process, we call it the 'Buyers Course' but it is open to anyone who thinks they could benefit.

Our third course, entitled 'Understanding the Polymer Supply Chain' will be run again in February 2016.

This course is a departure from some of the 3. Review of polymer feedstock and technical training that we have provided in the past. It is aimed to provide clarity on the economics of the polymer supply chain and to help those people in key roles to make more informed decisions about the purchasing of polymers they use every day.

Course Overview

- 1. Introduction to terminology within the industry.
- 2. Factors that affect competiveness:-
 - Scale
 - Location
 - Technology
 - Integration

- how it affects polymer production and economics:-
 - Ethylene
 - Propylene
 - Benzene
 - Others
- 4. Green Polymers.
- 5. Review of the current market and expectations for the next 3-6 months.

One of the key objectives of the course is to look at ways we can better interpret and sift the vast amount of information that the internet and industry media push to us and to explain some of the terminology that we all use every day, but don't fully understand.

Over the last 8 years nearly 200 candidates from approximately 80 different companies have attended our popular training courses.



We are going to run the course at the Bosworth Hall Hotel, in February. Like all of our courses, it will be free, so if you would like any information please contact your local representative or email duncan.scott@plastribution.co.uk.

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

Polymer and feedstock price data

provided by PIE. www.pieweb.com



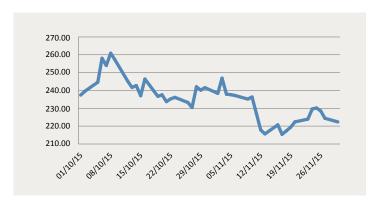
Oil Price Down, Monomer Prices Stable or Increasing, Polyolefin and Polystyrene Prices Increasing - Supply/Demand Fundamentals Continue to Define the Markets

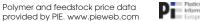
The premature closure of PE, PP and PS order books in November was for most in the industry a significant surprise. Typically this is a time of the year that polymer producers work hard to clear inventory so that there is sufficient storage capacity to absorb the polymer which is produced during the Christmas period when polymer processors are typically closed, and not taking deliveries over the holiday season.

The supply situation in November has set the stage for the market movements in December, where despite continued weakness in the crude oil market, key polymer feedstocks have either rolled-over or increased in price. Furthermore, polymer producers have announced and apparently successfully implemented price increases across a wide range of materials, including PE, PP and PS.

In spite of the seasonally low demand in December, there is again the likelihood of premature closure of order books as order inflows are reported as being very buoyant, and many producers cite the need to build inventory in anticipation of planned maintenance outages taking place in 2016. On this basis, it looks probable that 2016 will start with a fresh round of price increases, although at this time of the year the moral of the goose that laid the golden egg will no doubt be in the minds of many as producers' margins continue to swell and concern mounts about the sustainability of such relatively high prices.

Brent Crude £ per Tonne





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Oil Price Down, Monomer Prices Stable or Increasing, Polyolefin and Polystyrene Prices Increasing - Supply/Demand Fundamentals Continue to Define the Markets

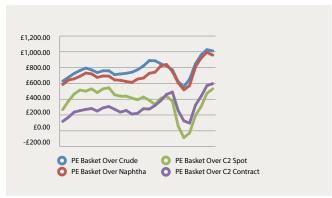
The contrasting fortunes of polyolefin, styrenic and engineering polymer producers are clearly illustrated by the graphs above. Although all except the engineering polymer spreads are likely to return towards increases when the November monomer increases are accounted

The fortunes of the engineering polymers producers are likely to come under further pressure as the global economy continues to slow.

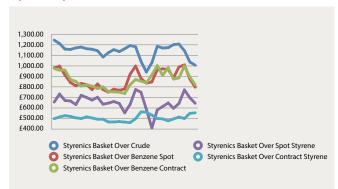
Monomer Prices (£ GBP per tonne)

Feedstock	Change (Contract)		
C2 (Ethylene)	£15.91		
C3 (Propylene)	€0.00		
Styrene	£24.74		
Benzene	£15.55		
Brent Crude	-£12.36		

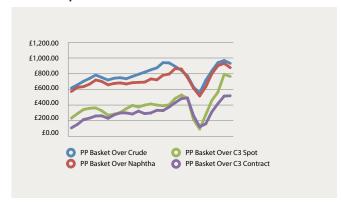
PE Basket Spreads



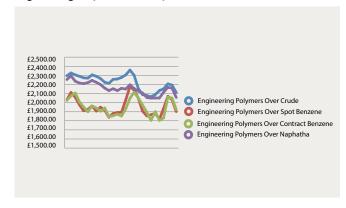
Styrenics Spread



PP Basket Spreads



Engineering Polymer Basket Spread

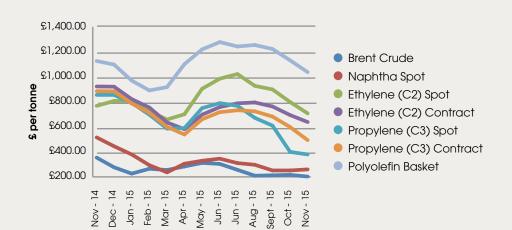


Polymer and feedstock price data provided by PIE. www.pieweb.com



know-how Polyolefins

Data provided by PIE www.pieweb.com



- Supply
- Demand

LDPE

Whilst ethylene rolled over in November, most producers implemented increases of around \$0/T, although the strength of the Pound versus the Euro mitigated the Sterling increases somewhat. Many producers closed order books early, citing strong demand, although in the UK demand felt rather flat for what is traditionally a strong month. This paved the way for further increases in December, with producers announcing hikes in excess of the Ethylene feedstock increase. There is again talk of early order book closures and rumours that producers will seek further increases in January.

- Supply
- Demand

LLDPE

The market for LLDPE remains highly fragmented according to product type. On C4 LLDPE for film, the November market was weak and prices were soft as traded product was readily available. Metallocene LLDPE and LLDPE for injection moulding were tight, and here prices moved forward despite the rollover in feedstock costs. Early order book closures were applied across the product range.

Increases in excess of the rise in feedstock costs have been announced for December with producers citing strong demand as the cause. There is the suggestion that order books may close early and that producers may seek increases for January.

- Supply
- Demand

HDPE

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The market situation on HDPE products remains highly variable according to the product type. Standard blow moulding grades are readily available and therefore pricing has been weak. However, injection moulding grades remain tight and therefore pricing has been much firmer. For November, most producers implemented price increases in Euro terms, although these were offset somewhat by the strength of Sterling. Many producers closed order books after the first week of the month, citing strong demand and the need to protect stocks for December sales Increases in excess of the feedstock cost increase have been announced for December and producers again report strong demand. Should this prove to be the case, it is likely order books will again close early and producers may seek increases for January.

- Supply
- Demand

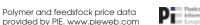
PF

Propylene prices fell in November, but this was largely ignored by producers who rolled-over pricing and took the opportunity to enhance their margin. Many reported strong demand, although the UK market felt somewhat subdued for what is seasonally a period of high demand. The supply situation remained mixed with some suppliers short and insisting on firm prices and yet others apparently willing to do deals. As with PE products, many producers closed order books early.

A similar situation prevails for December. C3 pricing has rolledover but again producers are seeking to enhance margins by increasing pricing, citing strong demand. There are warnings of early order book closures and price hikes in January.

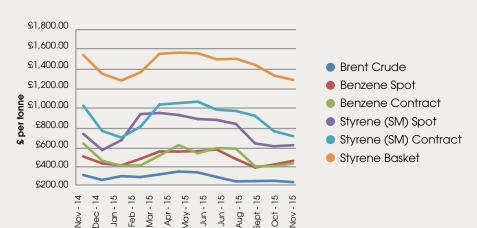
Other Polyolefins

EVA pricing and availability remains mixed with surplus availability from certain manufacturers and shortages of specific grades from others. Some suppliers announced price increases of the same proportion as other PE-based products, €0-100/T.





Data provided by PIE www.pieweb.com



- (Supply
- Demand

PS

SM fell but producers took advantage of tight supply in November and raised prices by up to €0/T. A reversal of falling SM prices is expected in December, and supply issues are unlikely to improve as high demand caused by the expectation of further increases in Q1 causes converters to bring in stock.

- Supply
- Demand

ABS

Demand was high, with reports that some EU suppliers were unable to meet customer requirements. Pricing has largely rolled over, despite falls in SM. December could bring some potential increases, and although demand will be lower over Christmas, processors may decide to stock up with the expectation of further increases.

- Supply
- Demand

PC/ABS

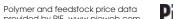
PC pricing is currently stable. Coupled with the above ABS trends, little movement is expected. Prices will remain static until any fundamentals show significant change.

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Other Styrenics

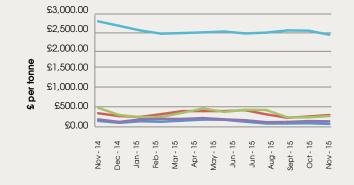
SAN and specialities such as ASA and SMMA continue to follow the price trend of Styrene monomers.

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www.pieweb.com



- Brent Crude
- Benzene Spot (EUR/t)
- Benzene Contract(EUR/t)
- Naphtha Spot (EUR/t)
- Engineering Basket

- Supply
- Demand

PA₆

With supplies high and demand low, market prices are coming under increasing downward pressure. This is expected to continue even with the recent slight rise in the cost of benzene. The expected slowdown for Christmas may be even more pronounced as some auto manufacturers are closing for longer than usual.

- Supply
- Demand

PA66

The situation for PA66 is similar to that for PA6. although the pressure for decreases is less and currently happening at a slower pace.

- **Supply**
- (S) Demand

POM

There are no impending changes on the horizon that will affect POM pricing and the situation continues to be one of stability. There will be the usual slowdown over Christmas, which may mean a slight softening of prices as more material becomes available.

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- **Supply**
- (S) Demand

PC

The price trend for PC is still pointing downwards and this situation is expected to continue into 2016. Large volumes of material are still being imported into a relatively high-priced European market.

- Supply
- (N) Demand

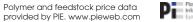
PMMA

Whilst there has been little change in PMMA pricing of late, notations are coming under increasing downward pressure and there could be a readjustment early in the New Year. General business levels are expected to reduce on the run up to the Christmas period.

- Supply
- (1) Demand

PBT/PET

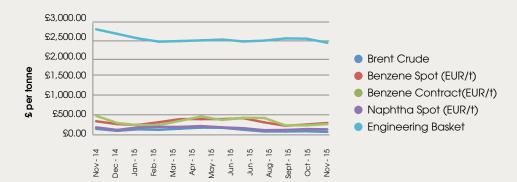
Prices will likely remain stable during December and into 2016. Business is expected to decline as usual over the Christmas season.





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Data provided by PIE www.pieweb.com



Other Engineering Polymers

The situation for most other engineering polymers remains stable with little or no movement on pricing, demand or availability.

> Polymer and feedstock price data provided by PIE. www.pieweb.com

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Fundamentals

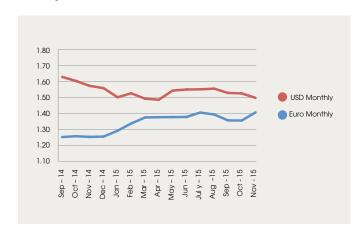
Brent Crude Oil Price per tonne



UK Economic Data

Topic	Item	Date	%	Trend
GDP	Real GDP (Q on Q)	Q3 2015	1.3	Ø
GDP	Real GDP (Y on Y)	Q3 2015	2.4	Ø
UK Output	Manufacturing (M on M)	Sep	0.8	Ø
UK Output	Manufacturing (Y on Y)	Sep	-0.6	a
Sales	New Car Registrations (Y on Y)	Oct	-1.1	9
Sales	Retail Sales (M on M)	Oct	-0.5	0
Labour	Unemployment Rate	Sept	5.3	Ø
Prices	CPI (Y on Y)	Oct	-0.1	€
Prices	RPI (YoY)	Oct	0.7	0
Interest Rate	Bank of England Base Rate	December	0.5	Ð

Exchange Rates



The proposed lifting of sanctions against Iran has put downward pressure on price in anticipation of increased supply.

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.

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Currently Sterling is sat between an appreciating USD and depreciating Euro. Although significant, these changes remain subtle compared to the more dramatic changes in feedstock 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 an 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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