

price
know-how

November 2011

What are the implications of high crude oil prices for future polymer pricing?

0845 34 54 560

www.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.

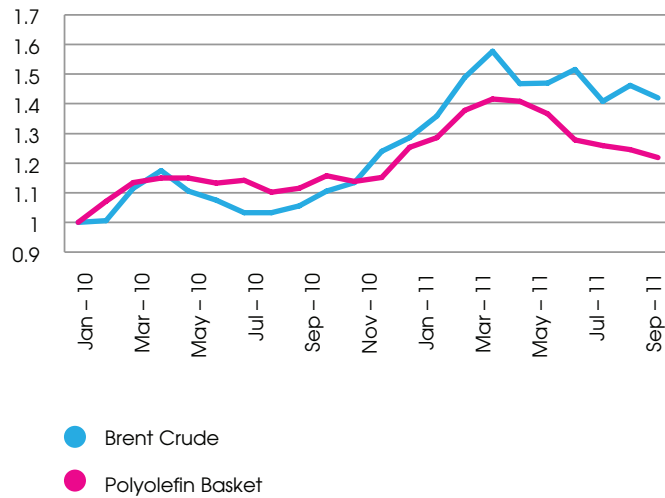
It is also believed that the report will support customers in explaining polymer price trends to their own customers, employees and shareholders.

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

The Plastribution Team

What are the implications of high crude oil prices for future polymer pricing?

Price Index Brent Crude & Polyolefin Basket



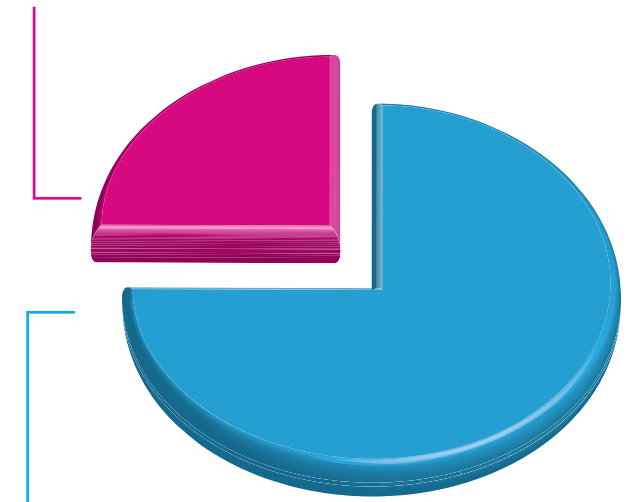
In previous editions of Price Know-how we have discussed the situation on oil prices versus the global economic situation, and in particular illustrated that compared with the 2008 / 2009 economic crisis where oil prices plunged from record highs of over \$140 per barrel to below \$40 per barrel the current situation is that the price of oil remains very stable at the relatively high level of \$110 per barrel.

Given that polymer prices have recently fallen by a bigger factor than crude oil what does this mean for polymer producers. As is illustrated below this very much depends on the type of producer.

First let us look at the components of polymer cost: -

Polyethylene Price Components March 11

Other Costs & Profit 22%



C2 Contract 78%

PE Margin over Feedstock

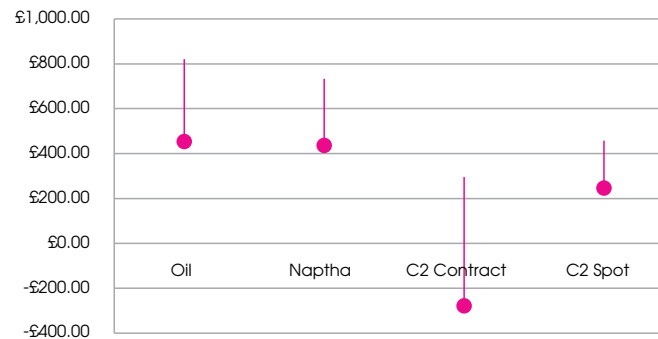
Now let's consider feedstock where there are various price points depending at what point the polymer producer buys (or values) its raw material.

Many people talk of non-integrated, part-integrated, and fully integrated producers. In the case of polyethylene and polypropylene their status is provided in the following table: -

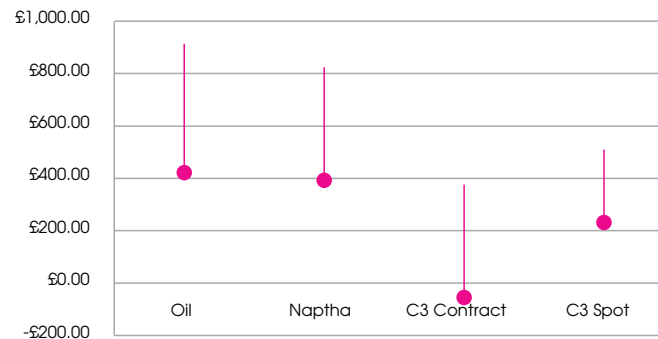
Feedstock	Status
Crude Oil	Integrated
Naptha	Part-integrated
Ethylene (C2)/Propylene(C3)	Non-integrated

The following graphs look at the range of margins for polyethylene and polypropylene for the last 3 years: -

PE Margin over Feedstock



PP Margin over Feedstock



From these graphs it is clear that non-integrated producers who buy ethylene or propylene on a contract basis have the biggest challenge, and are sometimes faced with the possibility of not even covering their variable costs. Whilst in theory economics would suggest that loss making production would cease immediately the reality is that many non-integrated polymer producers commonly enter into 'take or pay' contracts with their suppliers in order to ensure competitive pricing and continuity of supply.

Price adjustment in the spot markets are much more in-line with expectations, although the consequential reaction of the propylene suppliers encourages the buyers of spot propylene to continue to produce on the basis of on-going profitability.

Also it should be noted that there are alternatives to the crude oil, naphtha, C3 & C2 such as ethane gas to ethylene where costs can be very different, and profitability can still be maintained even in the most challenging market conditions.

The change in conversion profitability for contract buyers of propylene has been about £100 per tonne and ethylene £80 per tonne from their maximum levels. Non-integrated PP producers currently talk of losses in the order of £40 per tonne.

What next?

If oil prices remain high it is inevitable that those non-integrated polymer producers will reduce output, and eventually the market will tighten and prices will increase.

How long will this take?

Typically the longest period that losses are sustained by producers is 6 months? On that basis we are about halfway through the cycle and can anticipate strengthening rumours of price increases for the beginning of Q1 2012.

Similar arguments will apply to other volume polymers including, PS, PVC, & PET. The high margin engineering polymers tend to be less directly influenced by feedstock, and price is more influenced by competition to win market share.

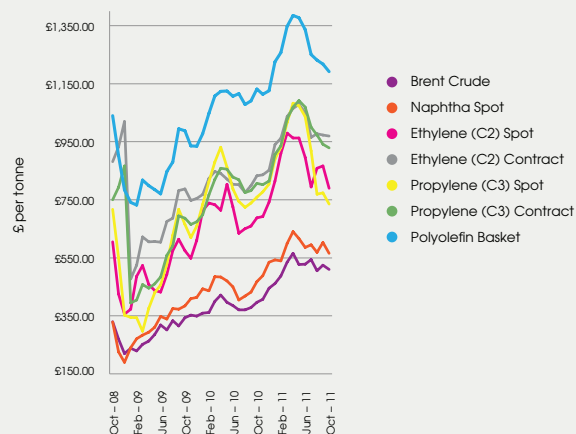
Monomer Prices (£ GBP per tonne)

Data provided by PIE www.pieweb.com

Feedstock	Change (Contract)
C2 (Ethylene)	-£17.39
C3 (Propylene)	-£47.83
Styrene	-£20.87
Benzene	-£35.66
Brent Crude	-£14.50

price know-how Polyolefins

Data provided by PIE
www.pieweb.com



Supply Demand

LDPE

So far demand has not recovered since the summer period, and producers are concentrating on managing inventory levels toward the year-end.

Feedstock prices coupled with the current economic crisis continue to apply pressure. Whilst the LDPE market remains structurally tight with global under capacity, the current demand situation means that availability is good.

Supply Demand

LLDPE

Slow off take from converters is resulting in improved supply.

Injection moulding grades are more balanced than film grades but feedstock and pressures from the broader economic situation continue to apply downward pressure on prices.

Supply Demand

HDPE

Availability is showing some signs of tightening and producers remain eager to implement price increases in order to restore acceptable margins.

Injection moulding grades remain in very short supply. Price increases are likely.

Supply Demand

PP

PP is the softest of the key polyolefins which in part is due to the complexity of the grade slate.

Although producers have worked hard to reduce inventories, buyers continue to purchase on a 'hand to mouth' basis and this is adding to the pressures on producers to reduce prices further.

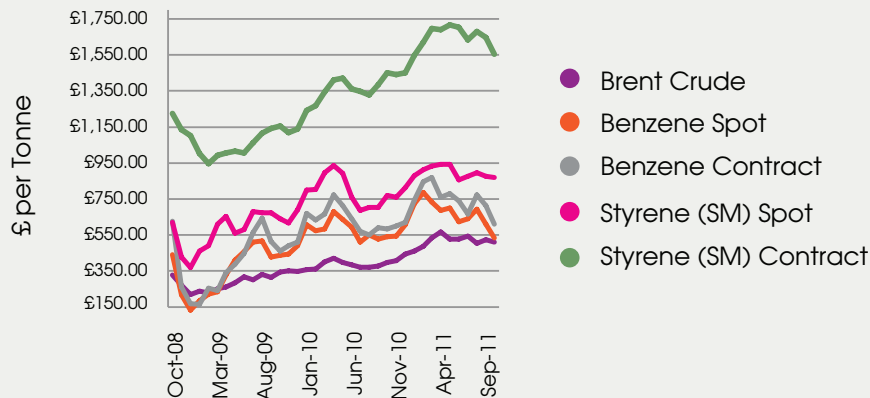
Other Polyolefins

The EVA supply situation has eased considerably since the summer period and as a result of lower demand there has been some pressure on prices, particularly for low VA content materials.

mPP and Plastomers follow the ethylene monomer price trend.

price know-how Styrenics

Data provided by PIE
www.pieweb.com



Supply Demand

PS

Despite a number of planned maintenance shutdowns supply remained quite sufficient, and price softened on the back of weakening feedstock and lower demand.

Butadiene costs have started to decrease taking pressure of the enhanced premium of HIPS over GPPS.

Supply Demand

ABS

Lead times are now similar for both Western European and Far Eastern sourced material.

Although prices from Asia are now generally more competitive it is notable that some Asian producers believe that prices in China have now bottomed and with a significant cut in ABS production that the balance will soon be in the favour of producers.

Supply Demand

PC/ABS

Long lead times persist and demand from the automotive sector remains strong.

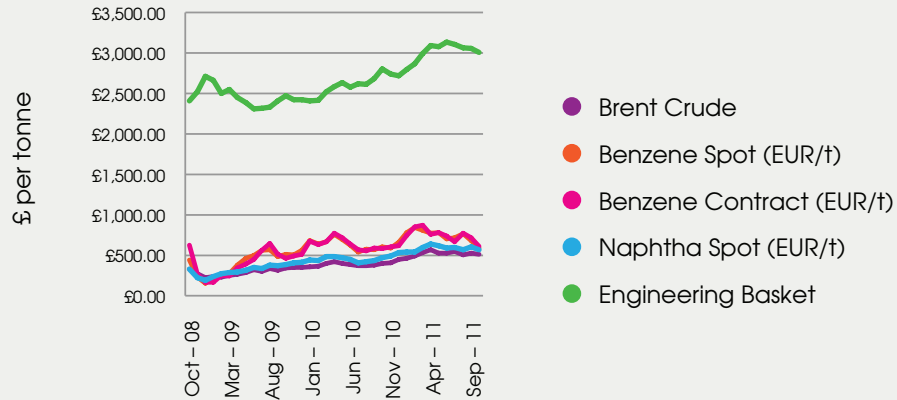
The effect of softening raw materials have yet to be reflected in pricing.

Other Styrenics

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

price
know-how
**Engineering
Polymers**

Data provided by PIE
www.pieweb.com



↻ Supply
↘ Demand

PA6

Lead times are steadily reducing, and customers have adopted more of a 'wait and see' approach to purchasing in the expectation that falling raw material costs will increase price competition.

The supply of non-prime materials continues to be very tight.

↻ Supply
↘ Demand

PA66

The situation here is basically the same as for PA6 where given an expectation that prices will at least stabilize if not fall then processors see less point in holding large inventories or making big forward commitments.

The supply of non-prime materials also continues to be very tight.

↻ Supply
↘ Demand

POM

Again a strong sentiment that prices have peaked has lead customers to ease back on their purchasing activity.

Already some of the 'exotic' material from China looks less attractive versus some of the more established Asian sources.

The impact of increased capacity in Europe is yet to be felt.

↻ Supply
↘ Demand

PC

It certainly looks as if the price of PC has peaked, and despite strong demand from a range of sectors including automotive price competition intensified at those accounts buying standard clear materials.

↻ Supply
↔ Demand

PMMA

One of the more stable materials, with producers adopting a more philosophical approach to market conditions.

Availability is much improved.

↻ Supply
↘ Demand

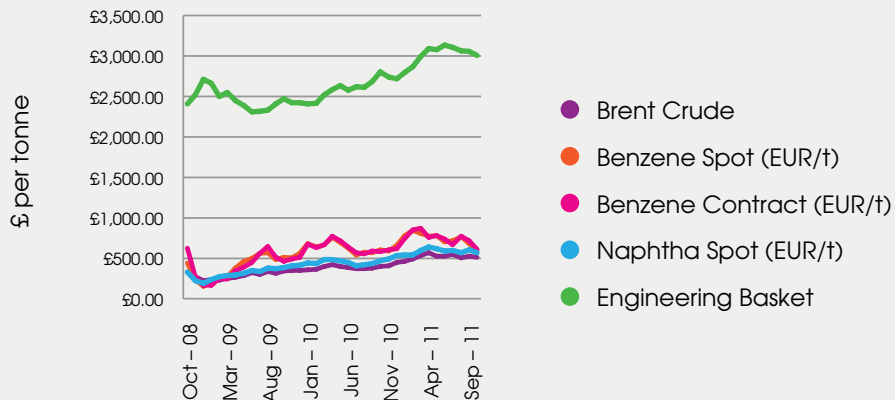
PBT/PET

The feedstock situation for PBT has improved significantly and general availability is as increased.

Demand from the automotive sector is good but the E&E market is fairly subdued. Producers are adopting a conservative approach to amending prices.

price
know-how
**Engineering
Polymers**

Data provided by PIE
www.pieweb.com



- Supply
- Demand

PPS

Supply from Japanese producers has improved and those affected by the Tsunami & Earthquake have lifted Force Majeure restrictions.

Demand has also increased as the Japanese car and car component industries also start to return to full production.

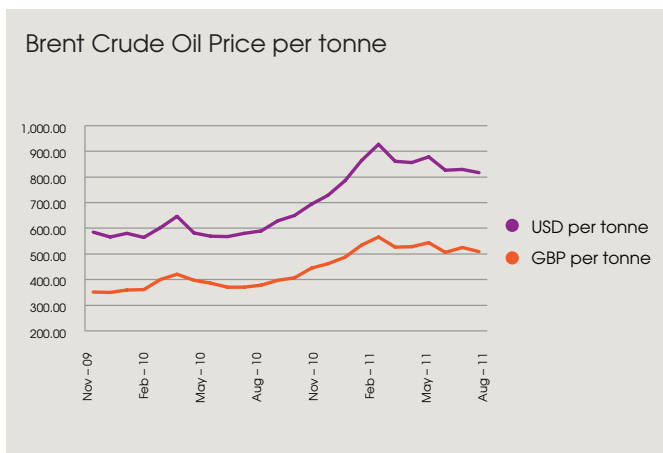
Other Engineering Polymers

In overall terms it looks as if the rate of price increase is now starting to reduce, and given the relatively high margin over feedstocks going forward very much will depend upon the global economic situation.

price
know-how
Fundamentals

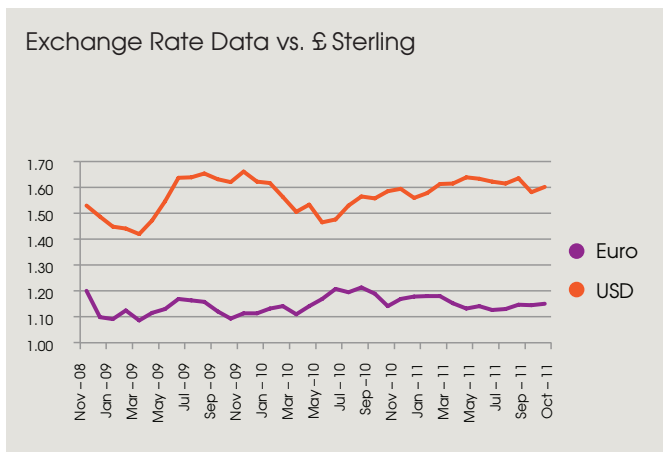
UK Economic Data

Topic	Item	Date	%	Trend
GDP	Real GDP (Q on Q)	Q2 2011	1.1	↻
GDP	Real GDP (Y on Y)	Q3 2011	1.9	↻
UK Output	Manufacturing (M on M)	July	0.1	⬇
UK Output	Manufacturing (Y on Y)	August	2.5	⬇
Sales	New Car Registrations (Y on Y)	September	-0.7	↻
Sales	Retail Sales (M on M)	September	0.7	↻
Labour	Unemployment Rate	August	8.1	↻
Prices	CPI (Y on Y)	September	5.2	↻
Prices	RPI (YoY)	September	5.6	↻
Interest Rate	Bank of England Base Rate	November	0.5	⬇



The step change in crude oil prices that caused downward pressure on polymer prices in May 2011 is clearly depicted on the graph. The subsequent effect on polymer pricing is discussed in the introduction to this report.

The Sterling / Euro exchange rate is a key factor in determining polymer prices, since most materials are Euro denominated. At current price level each Euro Cent change in prices represents a £16 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 with significant imports from Asia. Whilst weak Sterling increases competitiveness of exports from the UK it also causes inflation on imported goods including plastic raw materials.

Overall Sterling remains closely coupled with Euro the and the dollar, and there is no reason to expect any significant change in the coming months with all three currencies facing not dissimilar challenges.

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.

© Plastribution Limited. All rights reserved. 2011

Plastribution Limited
PO Box 7743
5 Ashby Park
CEVA House
Ashby-de-la-Zouch
Leicestershire
LE65 1XY

Tel: +44 (0) 1530 560560
Fax: +44 (0) 1530 560303

Email: sales@plastribution.co.uk
www.plastribution.co.uk

