



IAL Consultants
CP House, 97 – 107 Uxbridge Road
Ealing, London W5 5TL UK
Tel: + 44 20 8832 7780 Fax: + 44 20 8566 4931

PRESS RELEASE

14 JULY 2008

PU CHEMICALS AND PRODUCTS IN EUROPE, MIDDLE EAST & AFRICA (EMEA), 2007

IAL Consultants is pleased to announce the recent publication of its seventh edition of its report on the markets for Polyurethane Chemicals and Products in Europe, Middle East and Africa.

This new study updates and expands upon the information included in our previous study in 2005. The information contained within this report is based upon an extensive programme of interviews throughout the industry. The report contains both PU products production and raw materials consumption figures for the year 2007 and forecasts to 2012.

The report is presented in five volumes. The titles of all five volumes are:

Volume 1 - Raw Materials

Volume 2 - Foam Products

Section 1: Flexible Foam
Section 2: Rigid Foam

Volume 3 - Non-Foam Products

Section 1: Coatings
Section 2: Adhesives & Sealants
Section 3: Elastomers
Section 4: Binders

Volume 4 - End-use Markets

Volume 5 – Executive Summary

It should be noted that Volume 5, the Executive Summary, is only available to purchasers of the complete study.

Total production of polyurethane products is reported to have reached **4,522,945 tonnes** within the EMEA region during 2007. By 2012 this figure is forecast to be **6,462,240 tonnes**.

Of the three regions considered, the polyurethane industry remains the largest in Western Europe, but growth rates are strongest in the Middle East;

Total EMEA Production of All PU Products & Growth Rates by Region, 2007-2012 (Tonnes)

Country	2007 (Tonnes)	2012 (Tonnes)	2007-2012 (% Growth p.a.)
Western Europe	3,722,915	4,143,385	2.2
Eastern Europe	794,260	1,102,650	6.8
Middle East & Africa	859,660	1,216,205	7.2
Total Europe	5,376,835	6,462,240	3.7

Source: IAL Consultants

The demand for raw materials is broken down as follows:

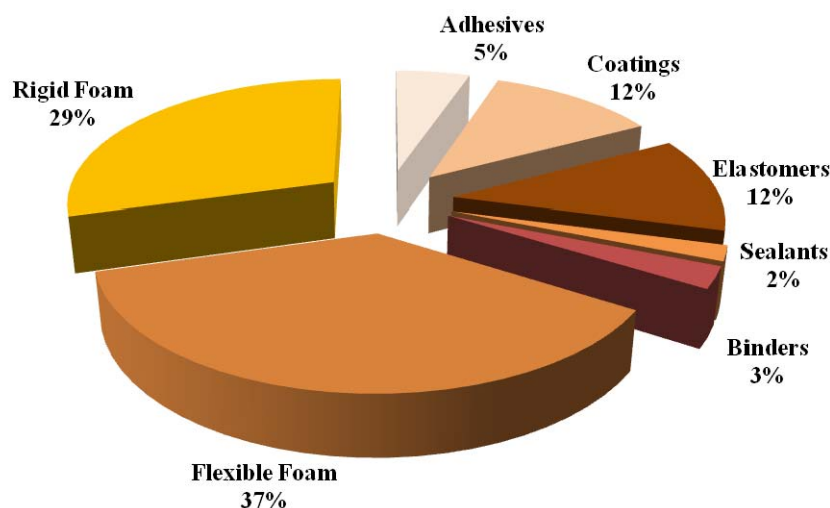
EMEA Raw Material Consumption, by Product, 2007 (Tonnes)

Raw Material	Volume (Tonnes)
PMDI	1,275,752
MMDI	263,401
TDI	597,601
Specialty Isocyanates	74,023
Polyether Polyols	1,613,808
Copolymer Polyols	190,999
PTHF	42,431
Acrylic polyols	82,986
Polyester polyols	522,437
Additives inc water, solvents	713,398
Total	5,376,835

Source: IAL Consultants

The total production of polyurethane can be broken down by major product type as follows:

Total Production of PU Products in EMEA by Segment, 2007



Raw Material Supply/Demand Balance

MDI and TDI are increasingly marketed as commodity aromatic chemicals, with worldwide consumption of approximately 4.0 million and 1.9 million tonnes respectively in 2007. Between 2006-2007, global demand for MDI increased by an estimated 8.0% whilst TDI demand grew by 4.7%. Global demand for MDI is forecast to grow at 6-8% per year during 2008 and 2009.

Higher than expected growth during 2007 has been due to a number of factors: high levels of activity in the world's construction industry, and demand for greater energy efficiency for new building and retrofit markets. In addition, 1-2% growth in MDI demand has been at the expense of TDI. Substitution is happening in moulded foam for auto seating, in binder applications and some flexible foam products including viscoelastic foams.

The demand for TDI has increased during the past 18 months at rates much higher than industry expectations. Growth rates for TDI have been 4% per year in Western Europe, 15-16% in Eastern Europe and 10% on average across the Middle East and Africa. At the same time there have been several unplanned plant shutdowns due to technical problems which have aggravated the tightness of the supply situation.

Despite the limited number of applications for TDI, market growth is expected to continue at around 4-4.5% per year globally for the next two years according to major suppliers. However, little relief from the high prices can be expected for another 2-3 years according to industry experts.

Industry forecasts suggest that the demand for MDI will grow at around 5% per year whilst TDI growth may slow from 5% during 2006-2007, to 3% during 2008-2010. Total consumption of aromatic isocyanates in Europe, Middle East and Africa during 2007 is estimated to have been over 2.13 million tonnes, comprising of 1.54 million tonnes of MDI and 597,000 tonnes of TDI.

Up until 2-3 years ago raw material prices were fairly similar across each region of the world, however, in the past 2-3 years prices have moved to reflect the imbalances in the regional supply/ demand chains. Raw material prices and markets have been knocked out of equilibrium due to a number of factors that the raw material manufacturers have been struggling to cope with such as:

- The China effect – where demand for raw material continues to outstrip supply thereby needing to import in material from across the world
- Plant capacity rationalisation
- Plant outages
- Natural disasters
- Rising oil prices
- Simultaneous positive growth for polyurethane products in nearly all major global markets

Regional prices applied to global consumer markets have added to the obvious disparities in labour rates. Although TDI prices have increased, the effect has been

mitigated in some markets due to the weakened dollar. However, in real terms the price of all isocyanates have increased significantly during the past two years.

Flexible Foam Continues to Grow

Total production of flexible polyurethane foam in 2007 was an estimated 1,981,640 tonnes, of which 1,534,200 tonnes was slabstock and 447,440 tonnes was moulded foam. The production of flexible slabstock remains dominated by polyether foams, standard, high resilience (HR) and combustion modified (CM) accounting for some 1,327,300 tonnes, whilst production of polyester slabstock amounted to 102,700 tonnes.

Viscoelastic foam, principally used by the bedding industry, continued to show strong growth, with production growing from an estimated 25,000 tonnes in 2004 to 104,200. This product is expected to show good growth of around 9% per year for the next few years.

Overall, growth in the flexible foam market is forecast to remain positive at around 5.5% per year for slabstock, depending upon the demand for furniture and bedding and driven by production in Eastern Europe and the Middle East & Africa, but only 2.1% per year for the next few years for moulded foam products. For moulded foam much depends upon the volume of polyurethane foam consumed in the automotive sector. The effect of raw material price rises, increased market penetration by furniture imports from Asia and a slowdown in demand from consumer markets in Western Europe, make future production volumes difficult to forecast.

Construction Industry Drives Demand for Rigid Foam

The total EMEA production of rigid polyurethane foam in 2007 is estimated to be 1,579,600 tonnes, of which the bulk is used for thermal insulation in the construction and refrigeration industries in the form of panel, boards and in-situ foam.

The benefit of polyurethane insulation usage in meeting new building regulations has spurred demand in Europe. Booming construction has also boosted demand in the Middle East. Across the region overall, the demand for rigid foam thermal insulation products is expected to continue to grow - although the global "credit crunch" could lead to some difficulties for the construction industry in Western Europe, legislation regarding energy efficiency, rising energy costs and environmental concerns should offset this with regards to demand for PU/PIR insulation products.

The Western European market for domestic refrigerators and freezers is mature and some production has moved to Eastern Europe, so local production is expected to remain static at best. Production of refrigerators and freezers in Eastern Europe and the Middle East & Africa is growing as local demand increases and global manufacturers shift production.

Polyurethane Production by End Use Industry

Furniture and bedding is still the leading area of demand for polyurethane materials, but demand from the construction industry is catching up fast. Polyurethane materials are mainly used in the form of rigid foam as an insulation material, but also in coatings, adhesives and sealants. Rigid foam insulation used by the appliance industry

is also exhibiting growth in the emerging markets of Eastern Europe and the Middle East, where demand is strong and production costs comparatively low. The automotive market continues to grow, with demand for new cars in Eastern Europe being met by increased production in the region. The use of polyurethane resins in the footwear industry continues to decline in Western Europe, but is experiencing good growth in much of the Middle East.

Polyurethane Demand By Major End Use Market in EMEA, 2007 (Tonnes)

End Use Markets	Demand (Tonnes)
Automotive	604,295
Refrigeration	369,650
Furniture & Bedding	1,298,431
Footwear	312,380
Construction	1,204,455

Source: IAL Consultants

This five-volume report comprises of more than 1,100 pages and more than 800 tables of data. The data includes raw material consumption by product type, by region and by major end use industry, supported with industry data on production volumes by major manufacturer. The data is also presented in a database format for simple searching by product or application. Profiles of leading flexible foamers and raw materials manufacturers are also included.

The report is available for the following prices:

Volume 1 - Raw Materials	€3,000
Volume 2 - Foam Products	€5,500
Volume 3 - Non-foam Products	€5,500
Volume 4 - Major End-Use Markets	€3,000
Volume 5 - Executive Summary	
THE COMPLETE REPORT	€12,500

For more details, please contact:

Mrs Cathy Galbraith
 IAL Consultants
 CP House, 97-107 Uxbridge Road
 Ealing
 London W5 5TL
 Telephone: +44 (0) 20 88 32 77 80
 Fax: +44 (0) 20 85 66 49 31
 Email: cathygalbraith@brg.co.uk

Or visit our website: www.ialconsultants.com