

# Maleic Anhydride Methodology

*October 2013*



Maleic anhydride (MA) is derived from butane in the US. In Europe and Asia, MA is derived predominantly from butane units, although a small amount is produced by benzene units.

Accounting for more than 50% of consumption, the primary outlet for maleic anhydride is for the manufacture of unsaturated polyester resins (UPR), which is used to reinforce fibreglass going into boat hulls, vehicle bodies, building panels, storage tanks or cast to form putty resins for automobile repairs. UPR is also used as sealants. An important outlet in Asia is the production of 1,4-butanediol (BDO), tetrahydrofuran (THF) and  $\gamma$ -butyrolactone. Other uses are in surface coatings, agrochemicals, lubricants, fumaric acid and malic acid. MA is commercially available in bulk, liquid or solid (flake) form.

MA is toxic and an irritant to the skin and mucous membranes.

ICIS pricing quotes maleic anhydride in **Europe, USA and Asia-Pacific**.

### **Frequency:**

Published weekly on Fridays (Europe, Asia-Pacific).

Published weekly on Tuesdays (USA).

### **Maleic Anhydride (Europe)**

#### **Weekly Price Assessments:**

##### *MA Quarterly Contract Prices*

- FD NWE (LIQUID) (EUR/MT & conversion to US CTS/LB)

##### *MA Spot Prices*

- FD NWE (LIQUID) (EUR/MT & conversion to US CTS/LB)
- FD NWE (FLAKE) (EUR/MT & conversion to US CTS/LB)

##### *MA Feedstock Contract Prices*

- BUTANE CIF NWE 3000mt+ (USD/MT & conversion to US CTS/GAL)\*

\* Production of maleic anhydride uses normal butane (n-butane) as feedstock. The feedstock butanes assessment at the foot of this report is for mixed butanes, which is at a price differential to normal butane (n-butane).

### **Maleic Anhydride (Asia-Pacific)**

#### **Weekly Price Assessments:**

##### *MA Briquette Spot Prices*

- CFR S.E.ASIA (USD/MT & conversion to US CTS/LB)

##### *MA Liquid Domestic Japanese Monthly Contract Prices*

- DELIVERED (JPY/KG & conversion to US CTS/LB)

### **Maleic Anhydride (USA)**

#### **Weekly Price Assessments:**

##### *MA Monthly Contract Prices*

- FOB, MOLTEN (US CTS/LB & conversion to USD/MT) .

**General Information:**

**Assessment window:** Price assessments are based on information supplied by market participants through the week up to close of business on Tuesdays at 1700 hours in Houston and at 1700 hours on Fridays in London and Singapore.

**Specification:** Quotes cover product with a minimum purity of 99.8%.

**Timing:** Cargoes loading or delivered four-six weeks forward from the date of publication. (loading time of two-four weeks, with either LC at sight or a max of 90 days).

**Terms:** 30-60 days after bill of loading date. In Asia, LC at sight or a max of 90 days.

**Standard cargo size:** In Europe, a typical cargo size is 1,000 tonnes for bulk volumes, while a typical truck/railcar is circa 20-25 tonnes. Average contract volumes in Europe for MA liquid are between 3,000-6,000 tonnes/year. In Asia, deals assessed cover 20-200 tonnes.

**Assessment Basis:** The European contract and spot price ranges for flake or liquid MA are assessed following verification from major buyers and sellers in northwest Europe. The European contract price ranges are for domestic European product only and are reported at a pre-discounted level. The spot range is for European and imported product, and is reported on a net basis. Most imported material comes from the US and Asia. Liquid makes up the bulk of material in the contract market, but there is also mention of liquid MA spot business. MA flakes make up around 5-10% of the overall MA market and price indications are represented on a spot basis. The European MA flake market is structurally dependent on imported product. The European price quotations are published on a free delivered (FD) basis, incorporating discussions and confirmed deals across the region. Spot price ranges can also move on market sentiment, in the absence of any bids/offers or trades.

In Asia, MA spot quotes are based on information gathered throughout the week on transactions, bid-sell ideas from producers, traders, distributors and buyers for 20-200 tonne cargoes. The Japan MA Monthly Contract Prices are assessed based on the average of the prices announced by a majority of the local producers. US market commentary centres on demand from the UPR sector and raw material prices of normal butane at Mont Belvieu, Texas. Prices are quoted monthly. Most demand is for molten MA, but the US also uses a small amount of imported briquette material. All regional reports offer details of traced transactions, news on the supply/demand balance, export/import information, contract price negotiations and general sentiment for price direction. Where applicable there is product information, comments on up and downstream market developments and general market intelligence.

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