

ADIPIC ACID

Adipic acid is primarily used in the production of nylon 6,6, as well as in the manufacturing of polyurethanes and polyester resins. Feedstocks include benzene, cyclohexane and ammonia. End-user products include automotive textiles, shoes and shoe soles.

The fibres made from nylon 6,6, are durable, tough, and abrasion resistant, which suits them for the manufacture of tyre cord. They are easy to colour, which gives them a secure place in the carpet market. The additional attributes of mouldability or processability make nylon 6,6, suitable for the engineering plastics market, and end-user products include automotive textiles, shoes and shoe soles.

Adipic acid is produced by oxidizing cyclohexane. Cyclohexane is oxidized with air over a cobalt naphthenate catalyst to give a mixture of cyclohexanol and cyclohexanone. These two products are separated from the unreacted cyclohexane and then hit with a 50% nitric acid solution. That opens up with C ring and adipic acid is formed. Yields are in the 90-95% range.

Exposure to adipic acid irritates the eyes, nose and throat as well as affecting the respiratory system. Adipic acid decomposes on heating, producing toxic and corrosive fumes of valeric acid and other substances.

ICIS pricing quotes Adipic Acid in **Europe** and **Asia-Pacific**.

Frequency:

Published weekly on Wednesdays.

Adipic Acid (EUROPE)

Weekly Price Assessments:

Adipic Acid Monthly Contract Prices

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

Adipic Acid (ASIA-PACIFIC)

Adipic Acid Monthly Contract Prices.

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

Adipic Acid Spot Prices.

- CFR N.E. ASIA (International origins) (USD/MT & conversion to US CTS/LB)
- CFR N.E. ASIA (China and Ukraine origins) (USD/MT & conversion to US CTS/LB)

General Information:

Assessment window: Assessments are based on information supplied by market participants up to the close of business on Wednesdays at 1800 hours London and Singapore time.

Specification: The prices quoted are for prime material, for use in non-nylon applications, unless otherwise specified.



Timing: In Europe and Asia, cargoes are for prompt delivery, if monthly contracts; or for delivery within the quarter specified, if quarterly contracts. Asian spot transactions are loaded or delivered within four-six weeks from the date of publication.

Terms: 30-90 days after bill of lading date.

Standard cargo size: All prices in the European report reflect values for customers of 1,000-20,000 tonnes per annum. In Asia, the typical spot transaction size is around 20-300 tonnes in container lots. Sizes beyond this will still be considered and parcel sizes will be mentioned in the text, as freight rates will be cheaper for bigger quantities.

Assessment basis: ICIS pricing reports on merchant market prices which are for non-nylon sectors only (adipic acid producers all have downstream nylon 6,6 facilities, therefore their use is captive and they do not usually buy on the open market).

ICIS pricing reports on merchant market prices which are only for the non-nylon sectors such as the polyurethanes and polyester resin sectors.

Asian contract prices were switched to a monthly from quarterly basis in November 2004 as key producers and buyers switched to monthly price negotiation due to volatility in the feedstock benzene and cyclohexanane markets. The contract price quote CFR N.E.ASIA mainly reflects trades to the Taiwanese and Korean market as the Japanese have a different price settlement system. The price reflects only the formula contracts which are related to the previous month's spot prices and not feedstock related contracts.

Spot trades in Asia are mainly focused on product flow to China, Taiwan and Korea.

