

ETHYL BENZENE

Around 99% of ethyl benzene (EB) produced in Europe is used in the production of styrene monomer, which is then used in many homopolymer, copolymer and terpolymer applications. These applications cover a wide scope of industrial, consumer and medical products. EB is also used for solvents for coatings and for other minor applications.

EB is produced by the catalytic alkylation of benzene with ethylene, or from mixed xylenes by isomer separation and catalytic isomerisation, or from 1,3-butadiene in a two-step process where the butadiene is converted to vinylcyclohexane which is then dehydrogenated.

EB is a colourless liquid, with a pungent aromatic odour. It is practically insoluble in water but soluble in ethyl alcohol, ether and benzene.

Short term health effects are drowsiness, fatigue, headache and mild eye and respiratory irritation. Long-term, EB has the potential to cause the following effects from a lifetime exposure at levels above the MCL: damage to the liver, kidneys, central nervous system and eyes.

ICIS pricing quotes ethyl benzene in **Europe** and the **US Gulf**.

Frequency:

Published weekly on Fridays

Ethyl Benzene (EUROPE)

Weekly Price Assessments:

Ethyl benzene Spot Prices

- FOB NWE (USD/MT & conversion to US CTS/LB)

Ethyl benzene Feedstock Prices

- BENZENE FOB NWE monthly (EUR/MT)

Ethyl Benzene (US GULF)

Weekly Price Assessments:

Ethyl Benzene Spot Prices

- FOB USG (US CTS/GAL & 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 Fridays at 1700 hours in London and Houston.

Specification: ASTM D3193-96(2003) Standard Specification

Timing: Cargoes loading four weeks from the reported transaction date.

Terms: Credit terms of up to 30 days.

Standard cargo size: 1,000 tonnes.

Assessment Basis: In Europe, spot business is uncommon, therefore price assessments are linked to ethylene and benzene prices, with a styrene component, using the formula below.

In the US, since ethyl benzene is largely an integrated product that feeds into the production of styrene monomer, there is little merchant trade to direct spot pricing. Sales between co-producers are more common. The published assessment uses the formula below. The US market commentary incorporates information on up and downstream markets as guides to ethyl benzene price outlook and assessment. Plant production information is also included where applicable.

Ethyl benzene assessment formula:

To get the EB range:
1a. Take the ethylene contract price
1b. Take the EUR > USD exchange rate
1c. Multiply these two figures to get the ethylene price in USD
1d. Multiply this by 0.26 to get the ethylene portion of EB.
2a. Take the average benzene spot price for the week (mid-point of weekly range)
2b. Multiply this by 0.76 to get the benzene portion of EB.
3. Add the ethylene portion and the benzene portion to find one end of the range
4a. Take the average styrene spot price for the week (mid-point of weekly range)
4b. Subtract \$150/tonne (which represents production costs) to find the other end of the range.
5. The resulting range is the USD spot price for EB.

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