



2-Ethoxyethyl acetate (Ethylglycolacetate)

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CAS number: 111-15-9

2-Ethoxyethyl acetate (2-EEA) is the ester of ethoxyethanol and acetic acid. It is colorless liquid with a fruity smell at room temperature and normal pressure. It is partially soluble in water (KH Chemicals).

2-Ethoxyethyl belongs to the group of glycol ethers which are mainly used as solvents. 2-EEA is produced by standard esterification techniques using 2-Ethoxyethanol, the acid anhydride or chloride and an acid catalyst [ECHA].

No production of 2-EEA takes place within the EU at present. The last European production site ceased production in 1996. Estimated sales in the year 2000 were less than 5,000 tonnes. In August 2002 the last importer announced that it discontinued all sales of 2-EEA. With this withdrawal from the market it was predicted "that the amount of product onto the EU market may rapidly drop even below 1,000 tonnes per year in the near future [ECHA].

Usage and exposure

It is used as active solvent for synthetic resins and is used in printing ink and surface coating formulations [KH Chemicals].

In the past 2-EEA was used in wide dispersive applications such as paints for private use, in surface treatment of metals and in construction, wood- and furniture industry [European Union].

2-EEA was mainly used as a solvent in the chemical industry and for the formulation of paints, lacquers and varnishes for industrial use. 2-EEA was also used as an intermediate in the chemical industry [ECHA].

Routs of exposure:

Inhalation, skin absorption, ingestion, skin and/or eye contact.

Target organs:

Eyes, respiratory system, gastrointestinal tract, hemopoetic system, reproductive system [CDC].

Health hazards:

2-Ethoxyethyl acetate can enter the body either by inhalation of contaminated air, by ingestion of contaminated water or by dermal contact with 2-ethoxyethyl acetate.

Inhalation of air containing 2-ethoxyethyl acetate can cause irritation of the respiratory tract and eyes. Exposure to high levels can affect the central nervous system with effects including, nausea, headache, dizziness, and drowsiness [SEPA].

Dermal contact with 2-ethoxyethyl acetate can cause the skin to turn blue in colour, skin irritation and dermatitis [SEPA].

High level exposure can also result in reproductive disorders, damage to the bone marrow, blood, kidneys and liver [SEPA].

Ingestion of 2-ethoxyethyl acetate may result in gastrointestinal irritation and a range of adverse health effects similar to those for inhalation [SEPA].

The International Agency for Research on Cancer has not designated 2-ethoxyethyl acetate in terms of its carcinogenicity. Exposure to 2-ethoxyethyl acetate at normal background levels is unlikely to have any adverse effect on human health [SEPA].

References:

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