propylene oxide@1,2-epoxypropane@methyloxirane

IDENTIFICATION NUMBERS

- **CAS:** 75-56-9
- **EC/EINECS:** 200-879-2
- **International Chemical Safety Card (ICSC):** 0192

MORE INFORMATION

- **Molecular Formula:** C3H6O
- **Synonyms:** 1,2-epoxipropano, metiloxirano

USES

solvent, pesticide, fumigant

CLASSIFICATION AND LABELLING (Regulation 1272/2008)

Symbols



GHS02

Flammable gases



GHS06

Acute toxicity (oral, dermal, inhalation)



GHS08

Respiratory sensitisation

Signal word: Danger

H Phrases

H224 : Extremely flammable liquid and vapour

Flam. Liq. (Cat. 1) : Flammable liquid

H350 : May cause cancer

Carc. (Cat. 1B) : Carcinogenicity

H340 : May cause genetic defects

Muta. (Cat. 1B) : Germ cell mutagenicity

H331 : Toxic if inhaled

Acute Tox. (Cat. 3) : Acute toxicity

H311 : Toxic in contact with skin

Acute Tox. (Cat. 3) : Acute toxicity

H302 : Harmful if swallowed

Acute Tox. (Cat. 4) : Acute toxicity

H335 : May cause respiratory irritation

STOT SE (Cat. 3) : Specific target organ toxicity - single exposure

H319 : Causes serious eye irritation

Eye Irrit. (Cat. 2) : Serious eye damage/eye irritation

Specific health risks

According to IARC

Substances classified as carcinogens or mutagens Category 2 under the CLP Regulation (GHS), bearing H351 and/or H341 phrases. These are substances suspected of causing cancer or heritable genetic mutations in humans.

IARC GROUP	IARC VOLUME
Grupo 2B	(VOL. 60; 1994)

Carcinogens (other sources)

Substances classified as carcinogens or mutagens Category 3 under the Dangerous Preparations Directive criteria (pre-CLP). Substances with limited evidence or indications of carcinogenicity or mutagenicity.

CATEGORY	SOURCE
G-A3, N-2, CP	ACGIH, NTP, CP65

Breast cancer

Substances classified with H362 phrase (may cause harm to breast-fed children). Toxic for reproduction due to effects on lactation or due to transmissibility through breast milk.

SOURCE

http://sciencereview.silentspring.org/mamm_detail.cfm?cid=75-56-9

Neurotoxic substances

Substances with neurotoxic effects

NEUROTOXIC EFFECT	LEVEL
SNC	1

SOURCE

14, 24

Occupational Exposure Limits (OEL)

Daily exposure limit values (VLA-ED) published by the Spanish National Institute of Safety and Health at Work (INSST). They represent the average concentration of a chemical agent in the worker's breathing zone, measured or calculated in a time-weighted manner for an 8-hour daily working period. (https://www.insst.es/valores-limites-de-exposicion)

OCCUPATIONAL EXPOSURE LIMITS

2.4 mg/m31 ppm

Carcinogens and mutagens (Regulation 1272/2008)

Substances classified as carcinogenic or mutagenic under Regulation 1272/2008

Specific environmental risks

Hazardous water substances (Germany)

Substances classified with chronic aquatic toxicity under the CLP Regulation (H410–H413 phrases, Aquatic Chronic categories 1 to 4). They pose a long-term hazard to aquatic organisms, even at low concentrations and through prolonged exposure.

MMA CLASSIFICATION

3

Volatile organic compounds

Volatile Organic Compounds (VOCs) regulated by Directive 1999/13/EC on the limitation of VOC emissions from certain activities, and by Royal Decrees 117/2003 and 227/2006. Substances contributing to tropospheric ozone formation that are subject to emission limits in industrial activities.

Environmental regulations

LPCIC (EPER)

Priority substances and specific pollutants within the EU water policy framework, established by the Water Framework Directive (2000/60/EC) and the Priority Substances Directive (2008/105/EC and amendments). Substances posing significant risk to European surface waters and subject to Environmental Quality Standards (EQS).

EPER WATER

false

EPER AIR

true

EPER SOIL

false

EPER Air

Substances from List 2 of Annex III of the IPPC Directive (integrated into the Industrial Emissions Directive 2010/75/EU). Pollutants that may affect surface and groundwater bodies and must be considered in the integrated environmental authorisation of industrial installations.

Restriction/prohibition regulations

Restricted substances under REACH

Substances listed in Annex XVII of the REACH Regulation (EC) No 1907/2006, subject to restrictions on their manufacture, placing on the market or use. Restrictions may be total or partial, limiting specific applications, maximum concentrations or user groups.

NOTES

Limitations: Without prejudice to the other parts of this Annex the following shall apply to entries 28 to 30: 1. Shall not be placed on the market, or used, - as substances, - as constituents of other substances, or, - in mixtures, for supply to the general public when the individual concentration in the substance or mixture is equal to or greater than: - either the relevant specific concentration limit specified in Part 3 of Annex VI to Regulation (EC) No 1272/2008, or, - the relevant concentration specified in Directive 1999/45/EC where no specific concentration limit is set out in Part 3 of Annex VI to Regulation (EC) No 1272/2008. Without prejudice to the implementation of other Community provisions relating to the classification, packaging and labelling of substances and mixtures, suppliers shall ensure before the placing on the market that the packaging of such substances and mixtures is marked visibly, legibly and indelibly as follows: ‘Restricted to professional users’. 2. By way of derogation, paragraph 1 shall not apply to: (a) medicinal or veterinary products as defined by Directive 2001/82/EC and Directive 2001/83/ EC; (b) cosmetic products as defined by Directive 76/ 768/EEC; (c) the following fuels and oil products: - motor fuels which are covered by Directive 98/70/EC, - mineral oil products intended for use as fuel in mobile or fixed combustion plants, - fuels sold in closed systems (e.g. liquid gas bottles); (d) artists’ paints covered by Directive 1999/45/ EC; (e) the substances listed in Appendix 11, column 1, for the applications or uses listed in Appendix 11, column 2. Where a date is specified in column 2 of Appendix 11, the derogation shall apply until the said date. Source: Regulation 1907/2006 (REACH). Annex XVII

Substances under PACT evaluation

Substances under active regulatory monitoring through ECHA's PACT (Public Activities Coordination Tool). Allows tracking which regulatory authorities are examining a substance and what potential regulatory actions are being considered (restriction, SVHC identification, harmonised classification, etc.).

REACH Candidates

Substances of Very High Concern (SVHC) identified by ECHA and included on the REACH Candidate List. These are substances with CMR, PBT, vPvB or endocrine disrupting properties liable to be included in Annex XIV (authorisation). Their inclusion generates notification obligations for articles containing them.

Major accident hazards (Seveso)

Hazardous substances listed in Annex I of the Seveso III Directive (Directive 2012/18/EU), transposed in Spain by Royal Decree 840/2015. Their presence in industrial establishments in quantities equal to or above established thresholds triggers obligations to implement major accident risk control measures.