1,4-dioxane

IDENTIFICATION NUMBERS

- **CAS:** 123-91-1
- **EC/EINECS:** 204-661-8
- **International Chemical Safety Card (ICSC):** 0041

MORE INFORMATION

- **Molecular Formula:** C4H8O2
- **Synonyms:** dioxido de etileno, dioxano

USES

solvent

CLASSIFICATION AND LABELLING (Regulation 1272/2008)

Symbols



GHS02

Flammable gases



GHS07

Acute toxicity (oral, dermal, inhalation



GHS08

Respiratory sensitisation

Signal word: **Danger**

H Phrases

H225 : Highly flammable liquid and vapour

Flam. Liq. (Cat. 2) : Flammable liquid

H350 : May cause cancer

Carc. (Cat. 1B) : Carcinogenicity

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

EUH019

EUH066

Specific health risks

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=123-91-1

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

G-A3, N-2, CP

SOURCE

ACGIH, NTP, CP65

Neurotoxic substances

Substances with neurotoxic effects

LEVEL

2

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

Grupo 2B

IARC VOLUME

(VOL. 11, SUPL. 7, VOL. 71; 1999)

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)

OEL DATA

VLA-ED: 7,3 mg/m3; 2ppmVLA-EC: 73 mg/m3; 20 ppmPosible contribución importante a la carga corporal total por exposición dérmica.

Carcinogens and mutagens (Regulation 1272/2008)

Substances classified as carcinogenic or mutagenic under Regulation 1272/2008

Restriction/prohibition regulations

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.

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.).