arsine

IDENTIFICATION NUMBERS

- **CAS:** 7784-42-1
- **EC/EINECS:** 232-066-3
- **International Chemical Safety Card (ICSC):** 0222

MORE INFORMATION

- **Molecular Formula:** AsH3
- **Synonyms:** ARSENAMINA, HIDRURO DE ARSENICO, Trihidruro de arsenico

⚠ **Black list — Substances particularly hazardous to the environment or health**

CLASSIFICATION AND LABELLING (Regulation 1272/2008)

Symbols



GHS02

Flammable gases



GHS04

Gases under pressure



GHS06

Acute toxicity (oral, dermal, inhalation)



GHS08

Respiratory sensitisation



GHS09

Hazardous to the aquatic environment

Signal word: Danger

H Phrases

H???

Gas a pres.,

H330 : Fatal if inhaled

Acute Tox. (Cat. 2 *) : Acute toxicity

H400 : Very toxic to aquatic life

Aquatic Acute (Cat. 1) : Hazardous to the aquatic environment

H410 : Very toxic to aquatic life with long lasting effects

Aquatic Chronic (Cat. 1) : Hazardous to the aquatic environment

H373 : May cause damage to organs through prolonged or repeated exposure

STOT RE (Cat. 2 *) : Specific target organ toxicity - repeated exposure

H220 : Extremely flammable gas

Flam. Gas (Cat. 1) : Flammable gas

Nota U.

Notes

- R.1272-Note U

Specific health risks

Endocrine disruptors

Substances with endocrine disrupting activity

DISRUPTOR LEVEL

NS

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 1

IARC VOLUME

(VOL. 23, SUPL. 7;1987)

Biological Exposure Indices (BEI)

Biological limit values (VLB) published by the Spanish National Institute of Safety and Health at Work (INSST). Reference values for assessing the risk of chemical agents by measuring them or their metabolites in biological matrices (blood, urine, exhaled air) of exposed workers.

BIOLOGICAL EXPOSURE INDICES

Biological indicator	BEI	Sampling time	Notes
Arsénico inorgánico mas metabolitos metilados en orina	35 µg As/l	Final de la semana laboral (1)	F

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

State / Form	TWA (ppm)	TWA (mg/m³)	STEL (ppm)	STEL (mg/m³)	Notes
—	0.005	0.016	—	—	VLB, r

Specific environmental risks

Atmospheric emissions

Substances subject to atmospheric emission limitations under the Industrial Emissions Directive (2010/75/EU) and its Spanish transposition. Includes pollutants regulated in industrial installation emission permits and best available technique reference documents (BAT/BREF).

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	EPER AIR
1	1

EPER SOIL

EPER Water

Substances from List 1 of Annex III of the IPPC Directive (integrated into the Industrial Emissions Directive 2010/75/EU). Atmospheric pollutants —including SO_2, NOx, heavy metals and organic compounds— that must be taken into account when setting emission limit values for IPPC installations.

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.

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.