endrin@1,2,3,4,10,10-Hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-1,4-endo,endo-5,8-dimethanonaphthalene@Hexadrin

IDENTIFICATION NUMBERS

- **CAS:** 72-20-8
- **EC/EINECS:** 200-775-7
- **International Chemical Safety Card (ICSC):** 1023

MORE INFORMATION

- **Molecular Formula:** C12H8Cl6O
- **Synonyms:** ENDRIN (ISO), 1,2,3,4,10,10-HEXACLORO-6,7-EPOXI-1,4,4A,5,6,7,8,8A-OCTAHIDRO-1,4:5,8-DIMETANONAFTALENO, ENDRINA

USES

pesticide, biocide, pesticide

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

CLASSIFICATION AND LABELLING (Regulation 1272/2008)

Symbols



GHS06

Acute toxicity (oral, dermal, inhalation)



GHS09

Hazardous to the aquatic environment

Signal word: **Danger**

H Phrases

H300 : Fatal if swallowed

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

H311 : Toxic in contact with skin

Acute Tox. (Cat. 3 *) : 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

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

Grupo 3

IARC VOLUME

(VOL. 5, SUPL. 7; 1987)

Endocrine disruptors

Substances with endocrine disrupting activity

DISRUPTOR LEVEL

NS, UE1

Neurotoxic substances

Substances with neurotoxic effects

NEUROTOXIC EFFECT

SNC

LEVEL

2

SOURCE

14

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

VLA-ED: 0,1 mg/m3Notas: ae; vía dérmica; s

Specific environmental risks

Persistent organic pollutants

Substances identified as persistent organic pollutants

POP	LINK
Annex I, part AAnnex IVAnnex V, part 2	https://chem.echa.europa.eu/activity-lists/popsProcess

Persistent bioaccumulative and toxic

Substances identified as Persistent, Bioaccumulative and Toxic (PBT) according to the criteria of Annex XIII of the REACH Regulation. They pose a special risk of accumulation in the environment and in the food chain.

SOURCES	LINK
OSPAR	http://www.ospar.org/v_substances/get_page.asp?v1=72208.xls

Aquatic toxicity (Water Framework Directive)

Substances classified with acute aquatic toxicity under the CLP Regulation (H400 phrase, Aquatic Acute 1). They present an immediate hazard to aquatic organisms, and their use or discharge can cause rapid damage to aquatic ecosystems.

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).

Soil contaminants

Substances identified as soil contaminants under Spanish and European environmental regulations. Includes substances capable of persisting in soil, bioaccumulating in the terrestrial food chain, and affecting soil ecosystems and groundwater.

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
false	false

EPER SOIL
true

EPER Soil

Substances from List 3 of Annex III of the IPPC Directive (integrated into the Industrial Emissions Directive 2010/75/EU). Substances present in waste generated by IPPC installations that must be controlled and minimised within the framework of best available techniques.

Restriction/prohibition regulations

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.).

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.