

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product name : Endosulfan

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

According to Regulation (EC) No1272/2008

Acute toxicity (Category 3)

Acute toxicity (Category 3)

Eye irritation (Category 2)

Acute aquatic toxicity (Category 1)

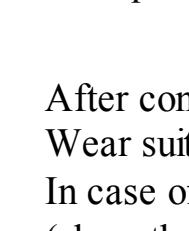
Chronic aquatic toxicity (Category 1)

According to European Directive 67/548/EEC as amended.

Very toxic by inhalation and if swallowed. Harmful in contact with skin. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Label elements

Pictogram



Signal word

Danger

Hazard statement(s)

H319 Causes serious eye irritation.

H301 Toxic if swallowed.

H311 Toxic in contact with skin.

H410 Very toxic to aquatic life with long lasting effects.

Precautionary statement(s)

P273 Avoid release to the environment.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P501 Dispose of contents/container to an approved waste disposal plant.

Hazard symbol(s)

T+ Very toxic

N

Dangerous for the environment

R-phrase(s)

R21 Harmful in contact with skin.

R26/28

Very toxic by inhalation and if swallowed.

R50/53

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S-phrase(s)

S28 After contact with skin, wash immediately with plenty of soap and water.

S36/37 Wear suitable protective clothing and gloves.

S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S60 This material and its container must be disposed of as hazardous waste.

S61 Avoid release to the environment. Refer to special instructions/ Safety data sheets.

S63

In case of accident by inhalation: remove casualty to fresh air and keep at rest.

Other hazards - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula : C9H6Cl6O3S

Molecular Weight : 406,93 g/mol

CAS-No.	EC-No.	Classification	Concentration
Endosulfan 115-29-7	204-079-4	Acute Tox. 3; Eye Irrit. 2; Aquatic Acute 1; Aquatic Chronic 1; H319, H301, H311, H410 <u>T+ N, R21 - R26/28 - R50/53</u>	-

For the full text of the H-Statements mentioned in this Section, see Section 16.

4. FIRST AID MEASURES

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing give artificial respiration Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Wear respiratory protection. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation.

Evacuate personnel to safe areas.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

Conditions for safe storage

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Personal protective equipment

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Handle with gloves.

Eye protection

Face shield and safety glasses

Skin and body protection

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form : crystalline

Colour : white

Odour : pungent

Safety data

pH : 7,2

Melting point : no data available

Boiling point : 106 °C at 0,9 hPa

Flash point : no data available

Ignition temperature : no data available

Lower explosion limit : no data available

Upper explosion limit : no data available

Density : 1,744 g/cm3

Water solubility : no data available

Partition coefficient: log Pow: 3,83

n-octanol/water

10. STABILITY AND REACTIVITY

Chemical stability

Stable under recommended storage conditions.

Conditions to avoid

no data available

Materials to avoid

Mercury/mercury oxides.

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Sulphur oxides, Hydrogen chloride gas

11. TOXICOLOGICAL INFORMATION

Acute toxicity

LD50 Oral - rat - 18 mg/kg

LC50 Inhalation - rat - 4 h - 80 mg/m3

LD50 Dermal - rabbit - 90 mg/kg

Remarks: Sense Organs and Special Senses (Nose, Eye, Ear, and Taste): Eye: Other. Prolonged skin contact may cause skin irritation and/or dermatitis.

Skin corrosion/irritation

no data available

Serious eye damage/eye irritation

no data available

Respiratory or skin sensitization

no data available

Germ cell mutagenicity

Genotoxicity in vitro - Human - lymphocyte

Sister chromatid exchange

Genotoxicity in vitro - mouse - lymphocyte

Mutation in mammalian somatic cells

Mutation in mammalian germ cells

Genotoxicity in vivo - mouse - Intrapерitoneal

Genotoxicity in vivo - Hamster - Intrapерitoneal

Cytogenetic analysis - Hamster - Intrapерitoneal

Cytogenetic analysis in vitro - mouse - Oral

Cytogenetic analysis in vitro - mouse - Lymphocyte

Genotoxicity in vitro - mouse - Lymphocyte

Genotoxicity in vitro - Human - Lymphocyte</