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2-Propanol,1,3-dichloro-, phosphate (3:1) (cas 13674-87-8) MSDS

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

1.1 Product identifiers

Product name : TDCPP

Product Number : 32951
Brand : Fluka
CAS-No. : 13674-87-8

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Manufacture of substances

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]

Acute toxicity, Inhalation (Category 3)

Acute toxicity, Oral (Category 4)

Skin irritation (Category

2) Eye irritation

(Category 2)

Chronic aquatic toxicity (Category 2)

Classification according to EU Directives 67/548/EEC or 1999/45/EC

Harmful by inhalation. Irritating to skin. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.2

Label elements

Labelling according Regulation (EC) No 1272/2008 [CLP]

Pictogram



Signal word

Danger

Hazard statement(s)

H302

Harmful if swallowed.

H315

Causes skin irritation.

H319

Causes serious eye irritation.

H331

Toxic if inhaled.

H411

Toxic to aquatic life with long lasting effects.

Precautionary statement(s)

P261

Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.

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.

P311

Call a POISON CENTER or doctor/ physician.

Supplemental Hazard

none

Statements

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

Hazard symbol(s)



R-phrases(s)

R20

Harmful by inhalation.

R38

Irritating to skin.

R51/53

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

S-phrases(s)

S61

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



2.3 Other hazards – none

3 COMPOSITION/INFORMATION ON INGREDIENTS

Substances

Formula C₉H₁₅Cl₆O₄P

Molecular Weight 430,90 g/mol

Component

Concentratio

Tris[2-chloro-1-(chloromethyl)ethyl] phosphate

CAS-No. 13674-87-8 EC-No. 237-159-2

4. FIRST AID MEASURES

4.1 Description of 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. Take victim immediately to hospital. 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.

4.2 Most important symptoms and effects, both acute and delayed

4.3 Indication of any immediate medical attention and special treatment needed

no data available

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media

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

5.2 Special hazards arising from the substance or mixture

Carbon oxides, Phosphorous oxides, Hydrogen chloride gas
Carbon oxides, Oxides of phosphorus, Hydrogen chloride gas

5.3 Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

5.4 Further information

no data available

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

6.2 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.

6.3 Methods and materials for containment and cleaning up

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.
Normal measures for preventive fire protection.

7.2 Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

7.3 Specific end uses

no data available

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters

8.2 Exposure controls

Appropriate engineering controls

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

Personal protective equipment

Eyeface protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of

contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

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

Body Protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) 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).

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

- | | |
|---|---|
| a) Appearance | Form: liquid
Colour: colourless |
| b) Odour | no data available |
| c) Odour Threshold | no data available |
| d) pH | no data available |
| e) Melting point/freezing point | no data available |
| f) Initial boiling point and boiling range | >200 °C at 1.013 hPa - Decomposes on heating. |
| g) Flash point | 250 - 252 °C - open cup |
| h) Evaporation rate | no data available |
| i) Flammability (solid, gas) | no data available |
| j) Upper/lower flammability or explosive limits | no data available |
| k) Vapour pressure | 9 hPa at 65 °C |
| l) Vapour density | no data available |
| m) Relative density | 1,514 g/cm ³ |
| n) Water solubility | no data available |
| o) Partition coefficient: n-octanol/water | no data available |
| p) Autoignition temperature | no data available |
| q) Decomposition temperature | no data available |
| r) Viscosity | no data available |
| s) Explosive properties | no data available |
| t) Oxidizing properties | no data available |

9.2 Other safety information

no data available

10. STABILITY AND REACTIVITY

10.1 Reactivity

no data available

10.2 Chemical stability

no data available

10.3 Possibility of hazardous reactions

no data available

10.4 Conditions to avoid

no data available

10.5 Incompatible materials

Strong oxidizing agents

10.6 Hazardous decomposition products

Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - rat - > 2.000 mg/kg

LD50 Oral - rat - 1.850 mg/kg

LC50 Inhalation - rat - 4 h - > 5.220 mg/m³

LD50 Dermal - rabbit - > 23.700 mg/kg

Remarks: Behavioral: Irritability. Diarrhoea Biochemical: Enzyme inhibition, induction, or change in blood or tissue levels True cholinesterase.

Skin corrosion/irritation

Skin - rabbit - Skin irritation

Serious eye damage/eye irritation

Eyes - rabbit - Mild eye irritation

Respiratory or skin sensitization

no data available

Germ cell mutagenicity

Genotoxicity in vitro - Ames test - Equivocal evidence.

Genotoxicity in vitro - Hamster - Embryo
Morphological transformation.

Genotoxicity in vivo - mouse - Gavage - negative
Micronucleus test

Carcinogenicity

Carcinogenicity - rat - Oral

Tumorigenic: Neoplastic by RTECS criteria. Kidney, Ureter, Bladder: Tumors.

Carcinogenicity - rat - Oral

Tumorigenic: Carcinogenic by RTECS criteria. Liver: Tumors.

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity

Reproductive toxicity - rat - Oral

Effects on Fertility: Litter size (e.g.; # fetuses per litter; measured before birth). Effects on Embryo or Fetus: Fetal death.

Developmental Toxicity - rat - Oral

Effects on Embryo or Fetus: Fetal death.

Specific target organ toxicity - single exposure

no data available

Specific target organ toxicity - repeated exposure

no data available

Aspiration hazard

no data available

Potential health effects

Inhalation
Ingestion
Skin
Eyes

Toxic if inhaled. Causes respiratory tract irritation.
Harmful if swallowed.
May be harmful if absorbed through skin. Causes skin irritation.
Causes eye irritation.

Additional Information

RTECS: UB1473000

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish	LC50 - Oncorhynchus mykiss (rainbow trout) - 1,1 mg/l - 96,0 h
Toxicity to daphnia and other aquatic invertebrates	EC50 - Daphnia magna (Water flea) - 4,6 mg/l - 48 h
Toxicity to algae	EC50 - Desmodesmus subspicatus (green algae) -> 10 mg/l - 72 h

Persistence and degradability

Biodegradability Result: - Not readily biodegradable.

Bioaccumulative potential

Bioaccumulation Oryzias latipes - 38 d - 9 µg/l
Bioconcentration factor (BCF): 50 - 89

12.4 Mobility in soil

no data available

12.5 Results of PBT and vPvB assessment

no data available

12.6 Other adverse effects

Toxic to aquatic life with long lasting effects.
Avoid release to the environment.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION

14.1 UN number

ADR/RID: 3082

IMDG: 3082

IATA: 3082

UN proper shipping name

ADR/RID: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Tris[2-chloro-1-

(chloromethyl)ethyl] phosphate)
IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Tris[2-chloro-1-(chloromethyl)ethyl] phosphate)

IATA: Environmentally hazardous substance, liquid, n.o.s. (Tris[2-chloro-1-(chloromethyl)ethyl] phosphate)

Transport hazard class(es)

ADR/RID: 9

IMDG: 9

IATA: 9

Packaging group

ADR/RID: III

IMDG: III

IATA: III

Environmental hazards

ADR/RID: yes

IMDG Marine pollutant: yes

IATA: yes

Special precautions for user

Further information

EHS-Mark required (ADR 2.2.9.1.10, IMDG code 2.10.3) for single packagings and combination packagings containing inner packagings with Dangerous Goods >5L for liquids or >5kg for solids.

15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

no data available

15.2 Chemical Safety Assessment

no data available

16. OTHER INFORMATION

Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. guidechem shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.