

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

Product name : Guanosine 5'-monophosphomorpholidate 4-morpholine-N,N'-dicyclohexylcarboxamidine salt

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

According to Regulation (EC) No1272/2008

Acute toxicity, Inhalation (Category 2)

Acute toxicity, Dermal (Category 3)

Acute toxicity, Oral (Category 3)

Skin irritation (Category 2)

Eye irritation (Category 2)

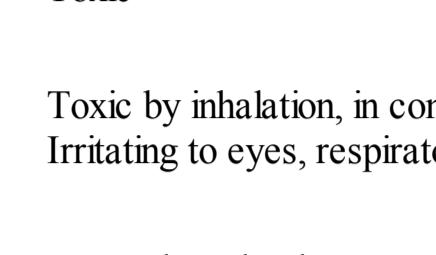
Specific target organ toxicity - single exposure (Category 3)

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

Toxic by inhalation, in contact with skin and if swallowed. Irritating to eyes, respiratory system and skin.

Label elements

Pictogram



Signal word Danger

Hazard statement(s)

H301 Toxic if swallowed.

H311 Toxic in contact with skin.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H330 Fatal if inhaled.

H335 May cause respiratory irritation.

Precautionary statement(s)

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P280 Wear protective gloves/protective clothing.

P284 Wear respiratory protection.

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

P310 Immediately call a POISON CENTER or doctor/physician.

Hazard symbol(s)

T Toxic

R-phrase(s)

R23/24/25 Toxic by inhalation, in contact with skin and if swallowed.

R36/37/38 Irritating to eyes, respiratory system and skin.

S-phrase(s)

S22 Do not breathe dust.

S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S36 Wear suitable protective clothing.

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

Other hazards - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula : C14H21N6O8P C17H31N3O

Molecular Weight : 725,77 g/mol

| CAS-No. | EC-No. | Classification | Concentration |
|---------|--------|----------------|---------------|
|---------|--------|----------------|---------------|

Guanosine 5'-monophosphomorpholidate

7361-07-1 - - - -

Acute Tox. 2; Acute Tox. 3;

Skin Irrit. 2; Eye Irrit. 2; STOT

SE 3; H301, H311, H315,

H319, H330, H335

T, R23/24/25 - R36/37/38

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. 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.

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.

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.

Recommended storage temperature: -20 °C

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 N99 (US) or type P2 (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 solid

Safety data

pH no data available

Melting point no data available

Boiling point no data available

Flash point no data available

Ignition temperature no data available

Lower explosion limit no data available

Upper explosion limit no data available

Water solubility no data available

10. STABILITY AND REACTIVITY

Chemical stability

Stable under recommended storage conditions.

Conditions to avoid

no data available

Materials to avoid

Strong oxidizing agents

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NOx), Oxides of phosphorus

11. TOXICOLOGICAL INFORMATION

Acute toxicity

no data available

Inhalation: no data available

Skin corrosion/irritation no data available

Serious eye damage/eye irritation no data available

Respiratory or skin sensitization no data available

GERM cell mutagenicity no data available

Carcinogenicity no data available

IARC: No probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity no data available

Specific target organ toxicity - single exposure no data available

Inhalation - May cause respiratory irritation.

Specific target organ toxicity - repeated exposure no data available

Aspiration hazard no data available

Potential health effects no data available

Inhalation Toxic if inhaled. Causes respiratory tract irritation.

SKIN Toxic if swallowed. Causes skin irritation.

EYES Causes eye irritation.

Signs and Symptoms of Exposure

Kidney, Gastrointestinal disturbance, to the eyes., Liver injury may occur., Damage to the heart.,

Respiratory, skin and eye irritation.

Additional Information

RETECS: no data available

12. ECOLOGICAL INFORMATION

Toxicity

no data available

Persistence and degradability no data available

Bioaccumulative potential no data available

Mobility in soil no data available

Contaminated packaging no data available

Dispose of as unused product.

13. DISPOSAL CONSIDERATIONS

PBT and vPvB assessment

no data available

14. TRANSPORT INFORMATION

ADR/RID

Not dangerous goods

IMDG

Not dangerous goods

ITATA

Not dangerous goods

15. REGULATORY INFORMATION

Text of H-code(s) and R-phrase(s) mentioned in Section 3

Acute Irr. T. Acute irritation

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H335 May cause respiratory irritation.

T. Toxic

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Further information

For R&D use only. Not for drug, household or other uses.</p