

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

Product name : 2-Hydroxyethylhydrazine

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

According to Regulation (EC) No1272/2008

Acute toxicity, Inhalation (Category 3)

Acute toxicity, Dermal (Category 3)

Acute toxicity, Oral (Category 3)

Skin irritation (Category 2)

Eye irritation (Category 2)

Carcinogenicity (Category 2)

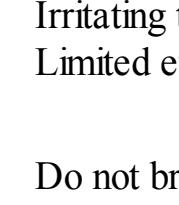
Specific target organ toxicity - single exposure (Category 3)

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. Limited evidence of a carcinogenic effect.

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.

H331 Toxic if inhaled.

H335 May cause respiratory irritation.

H351 Suspected of causing cancer.

Precautionary statement(s)

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P280 Wear protective gloves/protective clothing.

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

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.

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.

R40 Limited evidence of a carcinogenic effect.

S-phrase(s)

S23 Do not breathe vapour.

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

S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

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

Synonyms : 2-Hydrazinoethanol

Formula : C2H8N2O

Molecular Weight : 76,1 g/mol

CAS-No.	EC-No.	Classification	Concentration
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2-Hydrazinoethanol

109-84-2 203-711-6 -

Acute Tox. 3; Skin Irrit. 2; Eye Irrit. 2; Carc. 2; STOT SE 3;

H301, H311, H315, H319,

H331, H335, H351

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

R40

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 breathing vapors, mist or gas. 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

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

7. HANDLING AND STORAGE

Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

Conditions for safe storage

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.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Personal protective equipment

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).

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 clear, viscous liquid

Colour colourless

Safety data

pH no data available

Melting point -70 °C - lit.

Boiling point 155 - 160 °C at 43 hPa - lit.

Flash point 77 °C - closed cup

Ignition temperature no data available

Lower explosion limit no data available

Upper explosion limit no data available

Density 1,123 g/cm3 at 25 °C

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, Strong acids

Hazardous decomposition products

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

11. TOXICOLOGICAL INFORMATION

Acute toxicity

LD50 Oral - mouse - 139 mg/kg

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 - Hamster - Lungs

Cytogenetic analysis in vitro - Hamster - Lungs

Sister chromatid exchange - Hamster - Lungs

Genotoxicity in vivo - mouse - Oral

DNA inhibition

Carcinogenicity - mouse - Oral

Carcinogenicity - mouse - Skin

Carcinogenicity - mouse - Respiratory tract

Carcinogenicity - mouse - Liver

Carcinogenicity - mouse - Tumors

Carcinogenicity - mouse - Lung

Carcinogenicity - mouse - Thymus

Carcinogenicity - mouse - Pancreas

Carcinogenicity - mouse - Bladder

Carcinogenicity - mouse - Stomach

Carcinogenicity - mouse - Esophagus

Carcinogenicity - mouse - Small intestine

Carcinogenicity - mouse - Large intestine

Carcinogenicity - mouse - Heart

Carcinogenicity - mouse - Kidney

Carcinogenicity - mouse - Liver

Carcinogenicity - mouse - Lung

Carcinogenicity - mouse - Skin

Carcinogenicity - mouse - Thymus

Carcinogenicity - mouse - Pancreas

Carcinogenicity - mouse - Stomach

Carcinogenicity - mouse - Esophagus

Carcinogenicity - mouse - Small intestine

Carcinogenicity - mouse - Large intestine

Carcinogenicity - mouse - Heart

Carcinogenicity - mouse - Kidney

Carcinogenicity - mouse - Liver

Carcinogenicity - mouse - Lung

Carcinogenicity - mouse - Skin

Carcinogenicity - mouse - Thymus

Carcinogenicity - mouse - Pancreas

Carcinogenicity - mouse - Stomach

Carcinogenicity - mouse - Esophagus

Carcinogenicity - mouse - Small intestine

Carcinogenicity - mouse - Large intestine

Carc