

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

Product name : *N*-Hydroxyurethane

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

Not a dangerous substance according to GHS.

Not a hazardous substance or mixture according to EC-directives 67/548/EEC or 1999/45/EC.

Label elements

The product does not need to be labelled in accordance with EC directives or respective national laws.

Other hazards - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula : C₃H₇NO₃
Molecular Weight : 105,09 g/mol

CAS-No.	EC-No.	Classification	Concentration
Ethyl hydroxycarbamate 589-41-3	209-648-0	-	-

4. FIRST AID MEASURES

If inhaled

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

In case of skin contact

Wash off with soap and plenty of water.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

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

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

Avoid breathing vapors, mist or gas.

Environmental precautions

Do not let product enter drains.

Methods and materials for containment and cleaning up

Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Normal measures for preventive fire protection.

Conditions for safe storage

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.

Recommended storage temperature: -20 °C

Handle and open container with care.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Personal protective equipment

Respiratory protection

Respiratory protection not required. For nuisance exposures use type OV/AG (US) or type ABEK (EU EN 14387) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand 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.

Eye protection

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

Skin and body protection

Impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures

General industrial hygiene practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form : clear, viscous, liquid

Colour : dark red

Safety data

pH : no data available

Melting point : no data available

Boiling point : 113 - 116 °C at 4 hPa

Flash point : 113 °C - closed cup

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)

11. TOXICOLOGICAL INFORMATION

Acute toxicity

No data available

LD50 Oral - rat - > 10.000 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 - Mammal - lymphocyte

DNA damage

Genotoxicity in vitro - Hamster - Lungs

Mutation in mammalian somatic cells

Genotoxicity in vitro - Hamster - Lungs

Sister chromatid exchange

Genotoxicity in vitro - mouse - Embryo

Cytogenetic analysis

Genotoxicity in vitro - Human - HeLa cell

DNA inhibition

Genotoxicity in vivo - Hamster - Intraperitoneal

Sister chromatid exchange

Genotoxicity in vivo - mouse - Intraperitoneal

Sister chromatid exchange

Genotoxicity in vivo - rat - Intraperitoneal

Sister chromatid exchange

Genotoxicity in vivo - rat - Intraperitoneal

Sister chromatid exchange

Carcinogenicity

Carcinogenicity - mouse - Intraperitoneal

Tumorigenic:Neoplastic by RTECS criteria. Lungs, Thorax, or Respiration:Tumors. Leukaemia

Carcinogenicity - mouse - Intrapерitoneal

Tumorigenic:Equivocal tumorigenic agent by RTECS criteria. Lungs, Thorax, or Respiration:Tumors.

Leukaemia

Carcinogenicity - mouse - Unreported

Tumorigenic:Neoplastic by RTECS criteria. Tumorigenic Effects: Uterine tumors. Lungs, Thorax, or Respiration:Tumors.

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Carcinogenicity - rat - Subcutaneous

Tumorigenic:Neoplastic by RTECS criteria. Sense Organs and Special Senses (Nose, Eye, Ear, and Taste):Tumors.

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Tumorigenic:Neoplastic by RTECS criteria. Sense Organs and Special Senses (Nose, Eye, Ear, and Taste):Tumors.

Carcinogenicity - rat - Intraperitoneal

Sister chromatid exchange

Carcinogenicity - rat - Intraperitoneal

Sister chromatid exchange

Carcinogenicity - rat - Subcutaneous

Tumorigenic:Neoplastic by RTECS criteria. Lungs, Thorax, or Respiration: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 - mouse - Subcutaneous

Effects on Fertility: Pre-implantation mortality (e.g., reduction in number of implant per female; total number of implants per corpora lutea)

Effects on Embryo/Fetus: Effects on Fertility: Litter size (e.g., stunted fetuses per litter; measured before birth).

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