

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

Product name : 4-Hexen-3-one, predominantly *trans*

## 2. HAZARDS IDENTIFICATION

### Classification of the substance or mixture

According to Regulation (EC) No1272/2008

Flammable liquids (Category 3)

Acute toxicity, Oral (Category 4)

Skin irritation (Category 2)

Eye irritation (Category 2)

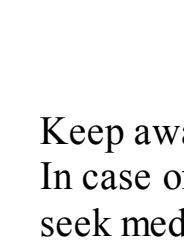
Specific target organ toxicity - single exposure (Category 3)

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

Flammable. Harmful if swallowed. Irritating to eyes, respiratory system and skin.

### Label elements

Pictogram



Signal word

Warning

Hazard statement(s)

H226 Flammable liquid and vapour.

H302 Harmful if swallowed.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

Precautionary statement(s)

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

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

Hazard symbol(s)

Xn Harmful

R-phrase(s)

R10 Flammable.

R22 Harmful if swallowed.

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

S-phrase(s)

S16 Keep away from sources of ignition - No smoking.

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.

Other hazards - none

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula : C<sub>6</sub>H<sub>10</sub>O

Molecular Weight : 98,14 g/mol

CAS-No.	EC-No.	Classification	Concentration
Hex-4-en-3-one 2497-21-4	219-681-2	Flam. Liq. 3; Acute Tox. 4; Skin Irrit. 2; Eye Irrit. 2; STOT SE 3; H226, H302, H315, H319, H335 Xn, R10 - R22 - 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. 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

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

## 5. FIRE-FIGHTING MEASURES

### Suitable extinguishing media

For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.

### Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

### Further information

Use water spray to cool unopened containers.

## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation.

Remove all sources of ignition. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

### Environmental precautions

Do not let product enter drains.

### Methods and materials for containment and cleaning up

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). 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

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Appearance

Form liquid

Colour light yellow

### Safety data

pH no data available

Melting point no data available

Boiling point 135 - 137 °C - lit.

Flash point 34 °C - closed cup

Ignition temperature no data available

Lower explosion limit no data available

Upper explosion limit no data available

Density 0,858 g/cm<sup>3</sup> at 25 °C

Water solubility no data available

## 10. STABILITY AND REACTIVITY

### Chemical stability

Stable under recommended storage conditions.

### Conditions to avoid

Heat, flames and sparks.

### Materials to avoid

Strong oxidizing agents, Strong bases

### Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides

## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

LD50 Oral - mouse - 780 mg/kg

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

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.

WHO: No component of this product present at levels greater than or equal to 0.1% is identified as carcinogenic to humans.

### Reproductive toxicity

no data available

### Inhalation target organ toxicity - single exposure

Inhalation - May cause respiratory tract irritation.

### Inhalation target organ toxicity - repeated exposure

no data available

### 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

no data available

#### Inhalation

May be harmful if inhaled. Causes respiratory tract irritation.

#### Ingestion

Harmful if swallowed, absorbed through skin. Causes skin irritation.

#### Eyes

May cause eye irritation.

### Signs and Symptoms of Exposure

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

### Additional Information

RTECS: MP9659000

## 12. ECOLOGICAL INFORMATION

### Toxicity

no data available

### Persistence and degradability

no data available

### Bioaccumulative potential

no data available

### Mobility in soil

no data available

### Other adverse effects

no data available

## 13. DISPOSAL CONSIDERATIONS

### Product

This material is highly flammable. Equipped with an afterburner and scrubber but exert extra care in igniting as the material can be explosive. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.

### Contaminated packaging

Dispose of as unused product.

## 14. TRANSPORT INFORMATION