

# SAFETY DATA SHEET

## 1. PRODUCT

### 1.1 Product identifiers

Name: trans-3-Hexenoic acid

CAS-No.: 1577-18-0

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

Identified uses : Laboratory chemicals, Synthesis of substances

## 2. HAZARDS IDENTIFICATION

### 2.1 Classification of the substance or mixture


#### GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Skin corrosion (Category 1B), H314

Serious eye damage (Category 1), H318

For the full text of the H-Statements mentioned in this Section, see Section 16.

### 2.2 GHS Label elements, including precautionary statements

|                            |   |
|----------------------------|---|
| Pictogram                  |   |
| Signal word                | Danger  |
| Hazard statement(s)        | H314 Causes severe skin burns and eye damage.   |
| Precautionary statement(s) | P264 Wash skin thoroughly after handling.<br>P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.<br>P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.<br>P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.<br>P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.<br>P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.<br>P310 Immediately call a POISON CENTER/doctor.<br>P321 Specific treatment (see supplemental first aid instructions on this label).<br>P363 Wash contaminated clothing before reuse.<br>P405 Store locked up.<br>P501 Dispose of contents/ container to an approved waste disposal plant. |

### 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

No data available

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Mixtures

Formula:  $C_6H_{10}O_2$

Molecular weight: 114.14 g/mol

#### Hazardous components

| Component              | Classification | Concentration |
|------------------------|----------------|---------------|
| trans-Hex-3-enoic acid |                |               |

| Component |           | Classification                  | Concentration |
|-----------|-----------|---------------------------------|---------------|
| CAS-No.   | 1577-18-0 | Skin Corr. 1B; Eye Dam. 1; H314 | <= 100 %      |
| EC-No.    | 216-417-8 |                                 |               |

For the full text of the H-Statements mentioned in this Section, see Section 16.

## 4. FIRST AID MEASURES

### 4.1 Description of first aid measures

|  |
|--|
| <b>General advice</b>  |
| Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.                                  |
| <b>If inhaled</b>  |
| If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.                            |
| <b>In case of skin contact</b>   |
| Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.                         |
| <b>In case of eye contact</b>  |
| Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital. |
| <b>If swallowed</b>  |
| Do NOT induce vomiting. 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

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

### 4.2 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

No data available

### 5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

### 5.4 Further information

No data available

## 6. ACCIDENTAL RELEASE MEASURES

### 6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

For personal protection see section 8.

### 6.2 Environmental precautions

Do not let product enter drains.

### 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.

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## 7. HANDLING AND STORAGE

### 7.1 Precautions for safe handling

Avoid inhalation of vapour or mist.

For precautions see section 2.2.

### 7.2 Conditions for safe storage, including any incompatibilities

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 use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

#### Components with workplace control parameters

Contains no substances with occupational exposure limit values.

### 8.2 Exposure controls

#### Appropriate engineering controls

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

#### Personal protective equipment

|                                   |  |
|-----------------------------------|--|
| Eye/face protection               | Tightly fitting safety goggles. Faceshield (8-inch minimum). 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.<br>Full contact<br>Material: butyl-rubber<br>Minimum layer thickness: 0.3 mm<br>Break through time: 480 min<br>Material tested: Butoject® (KCL 897 / Aldrich Z677647, Size M)<br>Splash contact<br>Material: Nature latex/chloroprene<br>Minimum layer thickness: 0.6 mm<br>Break through time: 30 min<br>Material tested: Lapren® (KCL 706 / Aldrich Z677558, Size M)<br>data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374<br>If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario. |
| 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).  |
| Control of environmental exposure | Do not let product enter drains.   |

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

|  |  |
|--|--|
| Appearance                                   | Form: liquid<br>Colour: colourless                     |
| Odour  | No data available                                      |
| Odour Threshold                              | No data available                                      |
| pH   | No data available                                      |
| Melting point/freezing point                 | Melting point/range: 11 - 12 °C (52 - 54 °F) - lit.    |
| Initial boiling point and boiling range      | 118 - 119 °C (244 - 246 °F) at 29 hPa (22 mmHg) - lit. |
| Flash point                                  | 113 °C (235 °F) - closed cup                           |
| Evaporation rate                             | No data available                                      |
| Flammability (solid, gas)                    | No data available                                      |
| Upper/lower flammability or explosive limits | No data available                                      |
| Vapour pressure                              | No data available                                      |
| Vapour density                               | 3.94 - (Air = 1.0)                                     |
| Relative density                             | 0.963 g/cm <sup>3</sup> at 25 °C (77 °F)               |
| Water solubility                             | No data available                                      |
| Partition coefficient: n-octanol/water       | No data available                                      |
| Auto-ignition temperature                    | No data available                                      |
| Decomposition temperature                    | No data available                                      |
| Viscosity                                    | No data available                                      |
| Explosive properties                         | No data available                                      |
| Oxidizing properties                         | No data available                                      |

### 9.2 Other safety information

Relative vapour density: 3.94 - (Air = 1.0)

## 10. STABILITY AND REACTIVITY

### 10.1 Reactivity

No data available

### 10.2 Chemical stability

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

No data available

### 10.4 Conditions to avoid

No data available

### 10.5 Incompatible materials

Bases, Oxidizing agents, Reducing agents

### 10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides

Other decomposition products - No data available

In the event of fire: see section 5

## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

|                       |
|-----------------------|
| <b>Acute toxicity</b> |
|-----------------------|

|   |
|---|
| No data available<br>Inhalation: No data available<br>Dermal: No data available<br>No data available  |
| <b>Skin corrosion/irritation</b>  |
| No data available   |
| <b>Serious eye damage/eye irritation</b>  |
| No data available   |
| <b>Respiratory or skin sensitisation</b>  |
| No data available   |
| <b>Germ cell mutagenicity</b>   |
| No data available   |
| <b>Carcinogenicity</b>  |
| 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.<br>ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.<br>NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.<br>OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA. |
| <b>Reproductive toxicity</b>  |
| No data available<br>No data available  |
| <b>Specific target organ toxicity -single exposure</b>  |
| No data available   |
| <b>Specific target organ toxicity -repeated exposure</b>  |
| No data available   |
| <b>Aspiration hazard</b>  |
| No data available   |
| <b>Additional Information</b>   |
| RTECS: Not available<br>Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea  |

## 12. ECOLOGICAL INFORMATION

### 12.1 Toxicity

No data available

### 12.2 Persistence and degradability

No data available

### 12.3 Bioaccumulative potential

No data available

### 12.4 Mobility in soil

No data available

### 12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

### 12.6 Other adverse effects

No data available

## 13. DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

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|--|
| <b>Product</b>   |
| Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. |
| <b>Contaminated packaging</b>  |
| Dispose of as unused product.  |

## 14. TRANSPORT INFORMATION

### DOT (US)

UN number: 3265 Class: 8 Packing group: II

Proper shipping name: Corrosive liquid, acidic, organic, n.o.s. (trans-Hex-3-enoic acid)

Reportable Quantity (RQ):

Poison Inhalation Hazard: No

### IMDG

UN number: 3265 Class: 8 Packing group: II EMS-No: F-A, S-B

Proper shipping name: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (trans-Hex-3-enoic acid)

### IATA

UN number: 3265 Class: 8 Packing group: II

Proper shipping name: Corrosive liquid, acidic, organic, n.o.s. (trans-Hex-3-enoic acid)

## 15. REGULATORY INFORMATION

### SARA 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

### SARA 313 Components

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

### SARA 311/312 Hazards

Acute Health Hazard

### Massachusetts Right To Know Components

No components are subject to the Massachusetts Right to Know Act.

### Pennsylvania Right To Know Components

| Component              | CAS-No.   | Revision Date |
|------------------------|-----------|---------------|
| trans-Hex-3-enoic acid | 1577-18-0 |               |

### New Jersey Right To Know Components

| Component              | CAS-No.   | Revision Date |
|------------------------|-----------|---------------|
| trans-Hex-3-enoic acid | 1577-18-0 |               |

### California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

## 16. OTHER INFORMATION

### Full text of H-Statements referred to under sections 2 and 3.

Eye Dam. Serious eye damage

H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.

Skin Corr. Skin corrosion

**HMIS Rating**

Health hazard: 3

Chronic Health Hazard:

Flammability: 1

Physical Hazard 0

**NFPA Rating**

Health hazard: 3

Fire Hazard: 1

Reactivity Hazard: 0

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