# Material Safety Data Sheet

Version 3.1
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## 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : 3,4-Dihydro-2H-pyran

Product Number : D106208
Brand : Aldrich

Company : Sigma-Aldrich Canada, Ltd
2149 Winston Park Drive
OAKVILLE ON L6H 6J8
CANADA
Telephone : +19058299500
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Emergency Phone # : 800-424-9300

## 2. COMPOSITION/INFORMATION ON INGREDIENTS

Formula : C5H8O
Molecular Weight : 84.12 g/mol

| CAS-No. | EC-No. | Index-No. | Concentration |
|---|---|---|---|
| **3,4-Dihydro-2H-pyran** | | | |
| 110-87-2 | 203-810-4 | - | - |

## 3. HAZARDS IDENTIFICATION

**WHMIS Classification**

B2 Flammable Liquid — Flammable Liquid
D2B — Irritant

**HMIS Classification**

**Health Hazard**: 1
**Flammability**: 3
**Physical hazards**: 0

**NFPA Rating**

**Health Hazard**: 1
**Fire** : 3
**Reactivity Hazard**: 0

**Potential Health Effects**

**Inhalation** May be harmful if inhaled. Causes respiratory tract irritation.
**Skin** May be harmful if absorbed through skin. Causes skin irritation.
**Eyes** Causes eye irritation.

**Ingestion** May be harmful if swallowed.

## 4. FIRST AID MEASURES

**General advice**
Consult a physician. Show this safety data sheet to the doctor in attendance.Move out of dangerous area.

**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

**Flammable properties**

| | |
|---|---|
| Flash point | -16 °C (3 °F) **- closed cup** |
| **Ignition temperature** | **240 °C (464 °F)** |

**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.

**Specific hazards**
Flash back possible over considerable distance. Container explosion may occur under fire conditions.

**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. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

**Environmental precautions**
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

**Methods for 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).

## 7. HANDLING AND STORAGE

**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.

**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. Store in cool place.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

**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**
Handle with gloves.

**Eye protection**
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, clear |
| Colour | colourless |

**Safety data**

| | |
|---|---|
| pH | no data available |
| Melting point | -70 °C (-94 °F) |
| **Boiling point** | **84 - 88 °C (183 - 190 °F)** at 1,013 hPa (760 mmHg) |
| Flash point | -16 °C (3 °F) **- closed cup** |
| **Ignition temperature** | **240 °C (464 °F)** |
| Lower explosion limit | 1.1 %(V) |
| Upper explosion limit | 13.8 %(V) |
| Density | 0.928 g/cm3 |
| Water solubility | no data available |
| Relative vapour density | 2.90 - (Air = 1.0) |

## 10. STABILITY AND REACTIVITY

**Storage stability**
Stable under recommended storage conditions.

**Conditions to avoid**
Heat, flames and sparks.

**Materials to avoid**
Oxidizing agents, Strong acids, Alcohols

**Hazardous decomposition products**
Hazardous decomposition products formed under fire conditions. - Carbon oxides

**Hazardous reactions**
Vapours may form explosive mixture with air.

## 11. TOXICOLOGICAL INFORMATION

**Acute toxicity**

no data available

**Irritation and corrosion**

no data available

**Sensitisation**

no data available

**Chronic exposure**

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.

**Signs and Symptoms of Exposure**

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

**Potential Health Effects**

| | |
|---|---|
| **Inhalation** | May be harmful if inhaled. Causes respiratory tract irritation. |
| **Skin** | May be harmful if absorbed through skin. Causes skin irritation. |
| **Eyes** | Causes eye irritation. |
| **Ingestion** | May be harmful if swallowed. |

## 12. ECOLOGICAL INFORMATION

**Elimination information (persistence and degradability)**

no data available

**Ecotoxicity effects**

no data available

**Further information on ecology**

no data available

## 13. DISPOSAL CONSIDERATIONS

**Product**
Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.

**Contaminated packaging**
Dispose of as unused product.

## 14. TRANSPORT INFORMATION

**DOT (US)**

UN-Number: 2376 Class: 3 Packing group: II
Proper shipping name: 2,3-Dihydropyran

**IMDG**
UN-Number: 2376 Class: 3 Packing group: II EMS-No: F-E, S-D
Proper shipping name: 2,3-DIHYDROPYRAN
Marine pollutant: No

**IATA**
UN-Number: 2376 Class: 3 Packing group: II
Proper shipping name: 2,3-Dihydropyran

## 15. REGULATORY INFORMATION

**TSCA Status**
On TSCA Inventory

**DSL Status**
All components of this product are on the Canadian DSL list.

**WHMIS Classification**

| | | |
|---|---|---|
| B2 | Flammable Liquid | Flammable Liquid |
| D2B | | Irritant |

## 16. OTHER INFORMATION

**Further information**

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Co., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.