

# Material Safety Data Sheet

acc. to OSHA and ANSI

Printing date 06/16/2009

Reviewed on 06/16/2009

## 1 Identification of substance:

### Product details:

**Product name:** 2,3-Dichloro-1-propanol

**Stock number:** A18444

### Manufacturer/Supplier:

Alfa Aesar, A Johnson Matthey Company  
Johnson Matthey Catalog Company, Inc.  
30 Bond Street  
Ward Hill, MA 01835-8099  
Emergency Phone: (978) 521-6300  
CHEMTREC: (800) 424-9300  
Web Site: [www.alfa.com](http://www.alfa.com)

**Information Department:** Health, Safety and Environmental Department

### Emergency information:

During normal hours the Health, Safety and Environmental Department. After normal hours call Chemtrec at (800) 424-9300.

## 2 Composition/Data on components:

### Chemical characterization:

**Description:** (CAS#)

2,3-Dichloro-1-propanol (CAS# 616-23-9): 100%

**Identification number(s):**

**EINECS Number:** 210-470-0

## 3 Hazards identification

### Hazard description:



T Toxic

### Information pertaining to particular dangers for man and environment

R 24/25 Toxic in contact with skin and if swallowed.

R 37/38 Irritating to respiratory system and skin.

R 41 Risk of serious damage to eyes.

R 68 Possible risk of irreversible effects.

### Classification system

**HMIS ratings (scale 0-4)**

(Hazardous Materials Identification System)

HEALTH	2
FIRE	2
REACTIVITY	1

Health (acute effects) = 2

Flammability = 2

Reactivity = 1

### GHS label elements



**Danger**

3.1/3 - Toxic if swallowed.

3.1/3 - Toxic in contact with skin.

3.2/2 - Causes skin irritation.

3.8/3 - May cause respiratory irritation.



**Danger**

3.3/1 - Causes serious eye damage.



**Warning**

3.5/2 - Suspected of causing genetic defects.

### Warning

2.6/4 - Combustible liquid.

### Prevention:

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

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Avoid breathing dust/fume/gas/mist/vapours/spray.  
 Wash thoroughly after handling.  
 Do not eat, drink or smoke when using this product.  
 Use only outdoors or in a well-ventilated area.  
 Wear protective gloves/protective clothing/eye protection/face protection.  
 Use personal protective equipment as required.

**Response:**

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.  
 IF ON SKIN: Wash with plenty of soap and water.  
 IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.  
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 IF exposed or concerned: Get medical advice/attention.  
 Immediately call a POISON CENTER or doctor/physician.  
 Call a POISON CENTER or doctor/physician if you feel unwell.  
 Specific treatment (see label).  
 Specific measures (see label).  
 Rinse mouth.

If skin irritation occurs: Get medical advice/attention.  
 Remove/Take off immediately all contaminated clothing.  
 Take off contaminated clothing and wash before reuse.  
 Wash contaminated clothing before reuse.  
 In case of fire: Use for extinction: CO<sub>2</sub>, powder or water spray.

**Storage:**

Store in a well-ventilated place. Keep container tightly closed.  
 Store in a well-ventilated place. Keep cool.  
 Store locked up.

**Disposal:**

Dispose of contents/container in accordance with local/regional/national/international regulations.

**4 First aid measures****General information**

Immediately remove any clothing soiled by the product.  
 In case of irregular breathing or respiratory arrest provide artificial respiration.

**After inhalation**

Supply fresh air. If required, provide artificial respiration. Keep patient warm.  
 Seek immediate medical advice.

**After skin contact**

Immediately wash with water and soap and rinse thoroughly.  
 Seek immediate medical advice.

**After eye contact**

Rinse opened eye for several minutes under running water. Then consult a doctor.

**After swallowing**

Do not induce vomiting; immediately call for medical help.  
 Seek immediate medical advice.

**5 Fire fighting measures****Suitable extinguishing agents**

Carbon dioxide, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

**Special hazards caused by the material, its products of combustion or resulting gases:**

In case of fire, the following can be released:

Carbon monoxide and carbon dioxide

Hydrogen chloride (HCl)

**Protective equipment:**

Wear self-contained respirator.  
 Wear fully protective impervious suit.

**6 Accidental release measures****Person-related safety precautions:**

Wear protective equipment. Keep unprotected persons away.  
 Ensure adequate ventilation

**Measures for environmental protection:**

Do not allow material to be released to the environment without proper governmental permits.

**Measures for cleaning/collecting:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

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**Product name: 2,3-Dichloro-1-propanol**

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Ensure adequate ventilation.

**Additional information:**

See Section 7 for information on safe handling

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

### 7 Handling and storage

**Handling****Information for safe handling:**

Keep container tightly sealed.

Store in cool, dry place in tightly closed containers.

Ensure good ventilation at the workplace.

**Information about protection against explosions and fires:** Keep ignition sources away.**Storage****Requirements to be met by storerooms and receptacles:** No special requirements.**Information about storage in one common storage facility:** Store away from oxidizing agents.**Further information about storage conditions:**

Keep container tightly sealed.

Store in cool, dry conditions in well sealed containers.

### 8 Exposure controls and personal protection

**Additional information about design of technical systems:**

Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

**Components with limit values that require monitoring at the workplace:** Not required.**Additional information:** No data**Personal protective equipment****General protective and hygienic measures**

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Remove all soiled and contaminated clothing immediately.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Avoid contact with the skin.

Avoid contact with the eyes and skin.

**Breathing equipment:** Use suitable respirator when high concentrations are present.**Protection of hands:**

Impervious gloves

Check protective gloves prior to each use for their proper condition.

**Material of gloves**

The selection of suitable gloves not only depends on the material, but also on quality.

Quality will vary from manufacturer to manufacturer.

**Eye protection:** Safety glasses**Body protection:** Protective work clothing.

### 9 Physical and chemical properties:

**General Information**

<b>Form:</b>	Liquid
<b>Odor:</b>	Not determined

**Change in condition**

<b>Melting point/Melting range:</b>	64-66°C (147-151°F) (6mm Hg)
<b>Boiling point/Boiling range:</b>	Not determined
<b>Sublimation temperature / start:</b>	Not determined

<b>Flash point:</b>	93°C (199°F)
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<b>Ignition temperature:</b>	Not determined
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<b>Decomposition temperature:</b>	Not determined
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<b>Danger of explosion:</b>	Product does not present an explosion hazard.
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**Explosion limits:**

<b>Lower:</b>	Not determined
<b>Upper:</b>	Not determined

<b>Vapor pressure:</b>	Not determined
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Product name: 2,3-Dichloro-1-propanol

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Density at 20°C (68°F): 1.3607 g/cm<sup>3</sup>Solubility in / Miscibility with  
Water: Slightly soluble**10 Stability and reactivity****Thermal decomposition / conditions to be avoided:**

Decomposition will not occur if used and stored according to specifications.

**Materials to be avoided:** Oxidizing agents**Dangerous reactions** No dangerous reactions known**Dangerous products of decomposition:**

Carbon monoxide and carbon dioxide

Hydrogen chloride (HCl)

**11 Toxicological information****Acute toxicity:****LD/LC50 values that are relevant for classification:**

Oral	LD50	90 mg/kg (rat)
Dermal	LD50	200 mg/kg (rabbit)
Inhalative	LCLo/4H	500 ppm/4H (rat)
Irritation of eyes	severe	20 mg (rabbit)

**Primary irritant effect:****on the skin:** Irritant to skin and mucous membranes.**on the eye:**

Strong irritant with the danger of severe eye injury.

Irritating effect.

**Sensitization:** No sensitizing effects known.**Other information (about experimental toxicology):**

Mutagenic effects have been observed on tests with bacteria.

Mutagenic effects have been observed on tests with laboratory animals.

**Subacute to chronic toxicity:**

Other than potential irritation (see above), no information on illness or injury to humans from acute or chronic exposure to this product is available.

**Additional toxicological information:**

To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

Danger through skin absorption.

No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

**12 Ecological information:****General notes:**

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

Do not allow material to be released to the environment without proper governmental permits.

**13 Disposal considerations****Product:****Recommendation** Consult state, local or national regulations to ensure proper disposal.**Uncleaned packagings:****Recommendation:** Disposal must be made according to official regulations.**14 Transport information****DOT regulations:****Hazard class:**

6.1

**Identification number:**

UN2810

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Product name: 2,3-Dichloro-1-propanol

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**Packing group:** III  
**Proper shipping name (technical name):** TOXIC LIQUID, ORGANIC, N.O.S. (2,3-Dichloro-1-propanol)  
**Label** 6.1

Land transport ADR/RID (cross-border)



**ADR/RID class:** 6.1 (T1) Toxic substances  
**Danger code (Kemler):** 60  
**UN-Number:** 2810  
**Packaging group:** III  
**Description of goods:** 2810 TOXIC LIQUID, ORGANIC, N.O.S. (2,3-Dichloro-1-propanol)

Maritime transport IMDG:



**IMDG Class:** 6.1  
**UN Number:** 2810  
**Label** 6.1  
**Packaging group:** III  
**Proper shipping name:** TOXIC LIQUID, ORGANIC, N.O.S. (2,3-Dichloro-1-propanol)

Air transport ICAO-TI and IATA-DGR:



**ICAO/IATA Class:** 6.1  
**UN/ID Number:** 2810  
**Label** 6.1  
**Packaging group:** III  
**Proper shipping name:** TOXIC LIQUID, ORGANIC, N.O.S. (2,3-Dichloro-1-propanol)

UN "Model Regulation": UN2810, TOXIC LIQUID, ORGANIC, N.O.S., 6.1, III

## 15 Regulations

Product related hazard informations:

Hazard symbols:

T Toxic

Risk phrases:

24/25 Toxic in contact with skin and if swallowed.  
 37/38 Irritating to respiratory system and skin.  
 41 Risk of serious damage to eyes.  
 68 Possible risk of irreversible effects.

Safety phrases:

20 When using do not eat or drink.  
 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
 27 Take off immediately all contaminated clothing.  
 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.  
 45 In case of accident or if you feel unwell, seek medical advice immediately.  
 60 This material and its container must be disposed of as hazardous waste.

National regulations

All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory.  
 All components of this product are listed on the Canadian Domestic Substances List (DSL).

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**Product name:** 2,3-Dichloro-1-propanol

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**Information about limitation of use:** For use only by technically qualified individuals.

## 16 Other information:

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

**Department issuing MSDS:** Health, Safety and Environmental Department.

**Contact:** Zachariah Holt

### Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

HMIS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

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