

1. PRODUCT AND COMPANY IDENTIFICATION

Product name	:	1,3-Diaminopropane	
Product Number	:	D23602	
Brand	:	Aldrich	
Product Use	:	For laboratory research purposes.	
Supplier	:	Sigma-Aldrich Canada Co. 2149 Winston Park Drive OAKVILLE ON L6H 6J8 CANADA	Manufacturer : Sigma-Aldrich Corporation 3050 Spruce St. St. Louis, Missouri 63103 USA
Telephone	:	+1 9058299500	
Fax	:	+1 9058299292	
Emergency Phone # (For both supplier and manufacturer)	:	1-800-424-9300	
Preparation Information	:	Sigma-Aldrich Corporation Product Safety - Americas Region 1-800-521-8956	

2. HAZARDS IDENTIFICATION

Emergency Overview

WHMIS Classification

B3	Combustible Liquid	Combustible Liquid
D1A	Very Toxic Material Causing Immediate and Serious Toxic Effects	Highly toxic by skin absorption
E	Corrosive Material	Corrosive

GHS Classification

Flammable liquids (Category 3)
Acute toxicity, Oral (Category 4)
Acute toxicity, Dermal (Category 2)
Skin corrosion (Category 1A)
Serious eye damage (Category 1)

GHS Label elements, including precautionary statements

Pictogram



Signal word

Danger

Hazard statement(s)

H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H310	Fatal in contact with skin.
H314	Causes severe skin burns and eye damage.

Precautionary statement(s)

P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P302 + P350	IF ON SKIN: Gently wash with plenty of soap and water.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or doctor/ physician.

HMIS Classification

Health hazard: 3
Flammability: 2
Physical hazards: 0

Potential Health Effects

Inhalation May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
Skin May be fatal if absorbed through skin. Causes skin burns.
Eyes Causes eye burns. Causes severe eye burns.
Ingestion Harmful if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : Trimethylenediamine
1,3-Propanediamine

Formula : C₃H₁₀N₂
Molecular Weight : 74.12 g/mol

CAS-No.	EC-No.	Index-No.	Concentration
Trimethylenediamine			
109-76-2	203-702-7	-	-

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

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.

If swallowed

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

5. FIREFIGHTING MEASURES**Conditions of flammability**

Flammable in the presence of a source of ignition when the temperature is above the flash point. Keep away from heat/sparks/open flame/hot surface. No smoking.

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 firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

Hazardous combustion products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NO_x)

Explosion data - sensitivity to mechanical impact

no data available

Explosion data - sensitivity to static discharge

no data available

Further information

Use water spray to cool unopened containers.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Wear respiratory protection. 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 and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

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.

hygroscopic

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. 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.

Full contact

Material: Fluorinated rubber

Minimum layer thickness: 0.7 mm

Break through time: 480 min

Material tested: Vitoject® (KCL 890 / Aldrich Z677698, Size M)

Splash contact

Material: Nature latex/chloroprene

Minimum layer thickness: 0.6 mm

Break through time: 84 min

Material tested: Lapren® (KCL 706 / Aldrich Z677558, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374
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.

Eye 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 and body protection

Complete suit protecting against chemicals, Flame retardant antistatic protective 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

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

Specific engineering controls

Use mechanical exhaust or laboratory fumehood to avoid exposure.

9. PHYSICAL AND CHEMICAL PROPERTIES**Appearance**

Form	liquid
Colour	light yellow

Safety data

pH	no data available
Melting point/freezing point	Melting point/range: -12 °C (10 °F) - lit.
Boiling point	140 °C (284 °F) - lit.
Flash point	51 °C (124 °F) - closed cup
Ignition temperature	350 °C (662 °F)
Auto-ignition temperature	no data available
Lower explosion limit	2.8 %(V)
Upper explosion limit	15.2 %(V)
Vapour pressure	< 11 hPa (< 8 mmHg) at 20 °C (68 °F)
Density	0.888 g/cm ³ at 25 °C (77 °F)
Water solubility	no data available
Partition coefficient: n-octanol/water	no data available
Relative vapor density	no data available
Odour	no data available
Odour Threshold	no data available
Evaporation rate	no data available

10. STABILITY AND REACTIVITY**Chemical stability**

Stable under recommended storage conditions.

Possibility of hazardous reactions

no data available

Conditions to avoid

Avoid moisture.
Heat, flames and sparks.

Materials to avoid

acids, Acid chlorides, Acid anhydrides, Strong oxidizing agents, Carbon dioxide (CO₂)

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NO_x)
Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION**Acute toxicity****Oral LD50**

LD50 Oral - rat - 700 mg/kg

Inhalation LC50

no data available

Dermal LD50

LD50 Dermal - rabbit - 177 mg/kg

Other information on acute toxicity

no data available

Skin corrosion/irritation

Skin - rabbit - Corrosive

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.

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.

Reproductive toxicity

no data available

Teratogenicity

Developmental Toxicity - mouse - Intraperitoneal

Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus). Effects on Embryo or Fetus: Other effects to embryo. Specific Developmental Abnormalities: Musculoskeletal system.

no data available

Specific target organ toxicity - single exposure (Globally Harmonized System)

no data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System)

no data available

Aspiration hazard

no data available

Potential health effects**Inhalation**

May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.

Ingestion Harmful if swallowed.
Skin May be fatal if absorbed through skin. Causes skin burns.
Eyes Causes eye burns. Causes severe eye burns.

Signs and Symptoms of Exposure

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., Cough, Shortness of breath, Headache, Nausea

Synergistic effects

no data available

Additional Information

RTECS: TX6825000

12. ECOLOGICAL INFORMATION

Toxicity

Toxicity to fish LC50 - Pimephales promelas (fathead minnow) - 1,190 mg/l - 96 h

Toxicity to daphnia and other aquatic invertebrates LC50 - Daphnia magna (Water flea) - 27 mg/l - 48 h

Persistence and degradability

Biodegradability Result: - Readily biodegradable.

Bioaccumulative potential

no data available

Mobility in soil

no data available

PBT and vPvB assessment

no data available

Other adverse effects

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. Offer surplus and non-recyclable solutions to a licensed disposal company. 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: 2922 Class: 8 (6.1) Packing group: II
Proper shipping name: Corrosive liquids, toxic, n.o.s. (Trimethylenediamine)
Marine Pollutant: No
Poison Inhalation Hazard: No

IMDG

UN number: 2922 Class: 8 (6.1) Packing group: II EMS-No: F-A, S-B
Proper shipping name: CORROSIVE LIQUID, TOXIC, N.O.S. (Trimethylenediamine)
Marine Pollutant: No

IATA

UN number: 2922 Class: 8 (6.1) Packing group: II
Proper shipping name: Corrosive liquid, toxic, n.o.s. (Trimethylenediamine)

15. REGULATORY INFORMATION**WHMIS Classification**

B3	Combustible Liquid	Combustible Liquid
D1A	Very Toxic Material Causing Immediate and Serious Toxic Effects	Highly toxic by skin absorption
E	Corrosive Material	Corrosive

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

16. OTHER INFORMATION**Further information**

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