# SAFETY DATA SHEET according to the OSHA Hazard Communication Standard

Version 6.10
Revision Date 07/14/2026
Print Date 07/15/2026

## SECTION 1. IDENTIFICATION

### 1.1 Product identifiers

Product name : 1,6-Dicyanohexane

Product Number : D78008
Brand : Aldrich
CAS-No. : 629-40-3

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

Identified uses : Laboratory chemicals, Synthesis of substances

Restrictions on use : Not Available

### 1.3 Details of the supplier of the safety data sheet

Company : Sigma-Aldrich Inc.
3050 SPRUCE ST
ST. LOUIS MO 63103
UNITED STATES

Telephone : +1 314 771-5765
Fax : +1 800 325-5052

### 1.4 Emergency telephone number

Emergency Phone # : 800-424-9300 CHEMTREC (USA) +1-703-527-3887 CHEMTREC (International) 24 Hours/day; 7 Days/week

## SECTION 2. HAZARDS IDENTIFICATION

**GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)**

**Hazards for the product as supplied**

Acute toxicity (Oral) : Category 3

**Other hazards**

None known.



The life science business of Merck KGaA, Darmstadt, Germany
operates as MilliporeSigma in the US and Canada

**GHS label elements**

Hazard pictograms :



Signal word : Danger

Hazard statements : H301 Toxic if swallowed.

Precautionary statements :

**Prevention:**

P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.

**Response:**

P301 + P310 + P330 IF SWALLOWED: Immediately call a POISON CENTER/ doctor. Rinse mouth.

**Storage:**

P405 Store locked up.

**Disposal:**

P501 Dispose of contents/ container to an approved waste disposal plant.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Substance

CAS-No. : 629-40-3

**Components**

| Chemical name | CAS No./Unique ID | Concentration (% w/w) | Trade secret |
|---|---|---|---|
| suberic acid dinitrile | 629-40-3* | >= 80 - <= 100 | TSC |

* Indicates that the identifier is a CAS No.
TSC- the actual concentration or concentration range is withheld as a trade secret

## SECTION 4. FIRST AID MEASURES

General advice : Show this safety data sheet to the doctor in attendance.

If inhaled : After inhalation: fresh air.

In case of skin contact : In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.



The life science business of Merck KGaA, Darmstadt, Germany
operates as MilliporeSigma in the US and Canada

| | | |
|---|---|---|
| In case of eye contact | : | After eye contact: rinse out with plenty of water. Remove contact lenses. |
| If swallowed | : | If swallowed: give water to drink (two glasses at most). Seek medical advice immediately. In exceptional cases only, if medical care is not available within one hour, induce vomiting (only in persons who are wide awake and fully conscious), administer activated charcoal (20 - 40 g in a 10% slurry) and consult a doctor as quickly as possible. |
| Most important symptoms and effects, both acute and delayed | : | The most important known symptoms and effects are described in the labelling (see section 2 GHS label elements) and/or in section 11 |
| Protection of first-aiders | : | For personal protection see section 8. |
| Notes to physician | : | No data available |

## SECTION 5. FIREFIGHTING MEASURES

| | | |
|---|---|---|
| Suitable extinguishing media | : | Carbon dioxide (CO2)<br>Foam<br>Dry powder |
| Unsuitable extinguishing media | : | For this substance/mixture no limitations of extinguishing agents are given. |
| Specific hazards during fire fighting | : | Combustible.<br><br>Vapours are heavier than air and may spread along floors.<br><br>Forms explosive mixtures with air on intense heating.<br><br>Development of hazardous combustion gases or vapours possible in the event of fire. |
| Hazardous combustion products | : | Carbon oxides<br><br>Nitrogen oxides (NOx) |



The life science business of Merck KGaA, Darmstadt, Germany
operates as MilliporeSigma in the US and Canada

| | | |
|---|---|---|
| Specific extinguishing methods | : | No data available |
| Further information | : | Suppress (knock down) gases/vapours/mists with a water spray jet.<br>Prevent fire extinguishing water from contaminating surface water or the ground water system. |
| Special protective equipment for fire-fighters | : | Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing. |

## SECTION 6. ACCIDENTAL RELEASE MEASURES

| | | |
|---|---|---|
| Personal precautions, protective equipment and emergency procedures | : | Advice for non-emergency personnel:<br>Do not breathe vapours, aerosols.<br>Avoid substance contact.<br>Ensure adequate ventilation.<br>Evacuate the danger area, observe emergency procedures, consult an expert.<br>Advice for emergency responders:<br>Wear appropriate personal protective equipment, as indicated in Section 8. |
| Environmental precautions | : | Do not let product enter drains. |
| Methods and materials for containment and cleaning up | : | Cover drains. Collect, bind, and pump off spills.<br>Observe possible material restrictions (see sections 7 and 10).<br>Take up carefully with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area. |

## SECTION 7. HANDLING AND STORAGE

For precautions see section 2 GHS label elements

| | | |
|---|---|---|
| Further information on storage conditions | : | Tightly closed.<br>Keep in a well-ventilated place.<br>Keep locked up or in an area accessible only to qualified or authorised persons. |
| Storage class | : | 6.1C, Combustible, acute toxic Cat.3 / toxic |



The life science business of Merck KGaA, Darmstadt, Germany
operates as MilliporeSigma in the US and Canada

compounds or compounds which causing chronic effects

Recommended storage temperature : Recommended storage temperature see product label.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Ingredients with workplace control parameters**

Contains no substances with occupational exposure limit values.

**Engineering measures** : No data available

**Personal protective equipment**

Respiratory protection : required when vapours/aerosols are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Recommended Filter type: : Filter type ABEK

The entrepeneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

Hand protection

| | | |
|---|---|---|
| Material | : | Chloroprene |
| Break through time | : | 480 min |
| Glove thickness | : | 0.65 mm |
| Protective index | : | Full contact |
| Manufacturer | : | KCL 720 Camapren® |

| | | |
|---|---|---|
| Material | : | Nitrile rubber |
| Break through time | : | 30 min |
| Glove thickness | : | 0.4 mm |
| Protective index | : | Splash contact |
| Manufacturer | : | Camatril® (KCL 730 / Aldrich Z677442, Size M) |

Remarks : This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating



The life science business of Merck KGaA, Darmstadt, Germany
operates as MilliporeSigma in the US and Canada

from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

| | | |
|---|---|---|
| Eye protection | : | Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).<br>Safety glasses |
| Skin and body protection | : | protective clothing |
| Hygiene measures | : | Change contaminated clothing. Preventive skin protection recommended. Wash hands after working with substance. |

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

| | | |
|---|---|---|
| Appearance | : | liquid (68 °F / 20 °C, 1,013 hPa) |
| Colour | : | light yellow |
| Odour | : | No data available |
| Odour Threshold | : | No data available |
| pH | : | No data available |
| Melting point/ range | : | 25.7 °F / -3.5 °C<br>Method: lit. |
| Boiling point/boiling range | : | 365 °F / 185 °C (20 hPa)<br>Method: lit. |
| Flash point | : | 221 °F / 105 °C<br>(1,013 hPa)<br>Method: closed cup |
| Evaporation rate | : | No data available |
| Flammability (solid, gas) | : | No data available |
| Flammability (liquids) | : | No data available |
| Burning rate | : | No data available |
| Upper explosion limit / Upper flammability limit | : | 29 %(V) |
| Lower explosion limit / | : | 8.5 %(V) |



The life science business of Merck KGaA, Darmstadt, Germany
operates as MilliporeSigma in the US and Canada

| | | |
|---|---|---|
| Lower flammability limit | | |
| Vapour pressure | : | 0.001 hPa (68 °F / 20 °C)<br>Method: OECD Test Guideline 104<br>GLP: yes |
| Relative vapour density | : | No data available |
| Relative density | : | No data available |
| Density | : | 0.954 g/cm3 (77 °F / 25 °C)<br>Method: lit. |
| Solubility(ies)<br>Water solubility | : | 11.3 g/l (68 °F / 20 °C)<br>Method: OECD Test Guideline 105<br>GLP: yes |
| Partition coefficient: n-octanol/water | : | log Pow: 0.56 (77 °F / 25 °C)<br>Method: OECD Test Guideline 107 |
| Autoignition temperature | : | 833 °F / 445 °C (1,013 hPa)<br>Method: DIN 51794 |
| Decomposition temperature | : | No data available |
| Viscosity, dynamic | : | No data available |
| Viscosity, kinematic | : | No data available |
| Flow time | : | No data available |
| Explosive properties | : | No data available |
| Oxidizing properties | : | none |
| Molecular weight | : | 136.19 g/mol |
| Particle characteristics<br>Particle size | : | No data available |

## SECTION 10. STABILITY AND REACTIVITY

| | | |
|---|---|---|
| Reactivity | : | Forms explosive mixtures with air on intense heating.<br><br>A range from approx. 15 Kelvin below the flash point is to be rated as critical. |
| Chemical stability | : | The product is chemically stable under standard |



The life science business of Merck KGaA, Darmstadt, Germany
operates as MilliporeSigma in the US and Canada

ambient conditions (room temperature) .

| | | |
|---|---|---|
| Possibility of hazardous reactions | : | Violent reactions possible with:<br>Bases<br>Strong oxidizing agents<br>strong reducing agents<br>Strong acids |
| Conditions to avoid | : | Strong heating. |
| Incompatible materials | : | no information available |
| Hazardous decomposition products | : | In the event of fire: see section 5 |

## SECTION 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

**Acute toxicity**
LD50 Oral - Rat - 150 mg/kg
Remarks: (RTECS)
Inhalation: No data available
Dermal: No data available
No data available

**Skin corrosion/irritation**
Skin - Rabbit
Result: No skin irritation
(OECD Test Guideline 404)

**Serious eye damage/eye irritation**
Eyes - Rabbit
Result: No eye irritation
(OECD Test Guideline 405)

**Respiratory or skin sensitization**
Local lymph node assay (LLNA) - Mouse
Result: negative
(OECD Test Guideline 429)

**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.

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.

OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

**Reproductive toxicity**
No data available



The life science business of Merck KGaA, Darmstadt, Germany
operates as MilliporeSigma in the US and Canada

**Specific target organ toxicity - single exposure**
No data available

**Specific target organ toxicity - repeated exposure**
No data available

**Aspiration hazard**
No data available

### 11.2 Additional Information

RTECS: WM2131000
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

After absorption:

We have no description of any toxic symptoms.

The following applies to cyanogen compounds/ nitriles in general: utmost caution! Release of hydrocyanic acid is possible - blockade of cellular respiration. Cardiovascular disorders, dyspnoea, unconsciousness.

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

## SECTION 12. ECOLOGICAL INFORMATION

**Ecotoxicity**

**Components:**

**suberic acid dinitrile:**

| | | |
|---|---|---|
| Toxicity to fish | : | LC50 (Leuciscus idus (Golden orfe)): 383 mg/l<br>End point: mortality<br>Exposure time: 96 h<br>Test Type: static test<br>Remarks: (ECHA) |
| Toxicity to daphnia and other aquatic invertebrates | : | EC50: > 120 mg/l<br>End point: Immobilization<br>Exposure time: 48 h<br>Test Type: static test<br>Analytical monitoring: yes<br>Method: OECD Test Guideline 202<br>GLP: yes |
| Toxicity to algae/aquatic plants | : | ErC50 (Desmodesmus subspicatus (green algae)): > 320 mg/l<br>Exposure time: 72 h<br>Test Type: static test |



The life science business of Merck KGaA, Darmstadt, Germany
operates as MilliporeSigma in the US and Canada

Analytical monitoring: yes
Method: OECD Test Guideline 201
GLP: yes

**Persistence and degradability**

**Components:**

**suberic acid dinitrile:**

Biodegradability : aerobic
Inoculum: activated sludge
Concentration: 20 mg/l
Result: Readily biodegradable.
Biodegradation: 90 - 100 %
Exposure time: 28 d
Method: OECD Test Guideline 301A
GLP: yes

**Bioaccumulative potential**

**Components:**

**suberic acid dinitrile:**

Partition coefficient: n-octanol/water : log Pow: 0.56 (77 °F / 25 °C)
Method: OECD Test Guideline 107

**Mobility in soil**

No data available

**Other adverse effects**

No data available

**Endocrine disrupting properties**

No data available

## SECTION 13. DISPOSAL CONSIDERATIONS

**Disposal methods**

Waste from residues : Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

## SECTION 14. TRANSPORT INFORMATION

**International Regulations**

**IATA-DGR**

UN/ID No. : UN 3276
Proper shipping name : Nitriles, liquid, toxic, n.o.s.
(suberic acid dinitrile)



The life science business of Merck KGaA, Darmstadt, Germany
operates as MilliporeSigma in the US and Canada

| | | |
|---|---|---|
| Class | : | 6.1 |
| Packing group | : | III |
| Labels | : | Division 6.1 - Toxic substances |
| Packing instruction (cargo aircraft) | : | 663 |
| Packing instruction (passenger aircraft) | : | 655 |

**IMDG-Code**

| | | |
|---|---|---|
| UN number | : | UN 3276 |
| Proper shipping name | : | NITRILES, LIQUID, TOXIC, N.O.S. (suberic acid dinitrile) |
| Class | : | 6.1 |
| Packing group | : | III |
| Labels | : | 6.1 |
| EmS Code | : | F-A, S-A |
| Marine pollutant | : | no |

**Transport in bulk according to IMO instruments**

Not applicable for product as supplied.

**National Regulations**

**49 CFR**

| | | |
|---|---|---|
| UN/ID/NA number | : | UN 3276 |
| Proper shipping name | : | Nitriles, liquid, toxic, n.o.s. (suberic acid dinitrile) |
| Class | : | 6.1 |
| Packing group | : | III |
| Labels | : | Division 6.1 - Toxic substances |
| ERG Code | : | 151 |
| Marine pollutant | : | no |
| Poison Inhalation Hazard | : | No |

**Special precautions for user**

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

## SECTION 15. REGULATORY INFORMATION

**CERCLA Reportable Quantity**

This material does not contain any components with a CERCLA RQ.

**SARA 304 Extremely Hazardous Substances Reportable Quantity**

This material does not contain any components with a section 304 EHS RQ.

**SARA 302 Extremely Hazardous Substances Threshold Planning Quantity**

This material does not contain any components with a section 302 EHS TPQ.

| | | |
|---|---|---|
| **SARA 311/312 Hazards** | : | Acute Health Hazard |



The life science business of Merck KGaA, Darmstadt, Germany
operates as MilliporeSigma in the US and Canada

**SARA 313** : 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.

**US State Regulations**

**Massachusetts Right To Know**

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

**Pennsylvania Right To Know**

suberic acid dinitrile 629-40-3

**Maine Chemicals of High Concern**

Product does not contain any listed chemicals

**Vermont Chemicals of High Concern**

Product does not contain any listed chemicals

**Washington Chemicals of High Concern**

Product does not contain any listed chemicals

**The components of this product are reported in the following inventories:**

US TSCA : All substances listed as active on the TSCA inventory

**TSCA list**

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

## SECTION 16. OTHER INFORMATION

**Full text of other abbreviations**

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonised System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organisation; ISHL - Industrial Safety and Health Law (Japan); ISO -



The life science business of Merck KGaA, Darmstadt, Germany
operates as MilliporeSigma in the US and Canada

International Organisation for Standardisation; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organisation for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

The information is believed to be correct but is not exhaustive and will be used solely as a guideline, which is based on current knowledge of the chemical substance or mixture and is applicable to appropriate safety precautions for the product. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.
Copyright 2025 Sigma-Aldrich Co. LLC. License granted to make unlimited paper copies for internal use only.

Revision Date : 07/14/2026

US / EN



The life science business of Merck KGaA, Darmstadt, Germany
operates as MilliporeSigma in the US and Canada