

# SAFETY DATA SHEET

Creation Date 16-Nov-2010

Revision Date 18-Dec-2025

Revision Number 5

This safety data sheet was created pursuant to the requirements of: US OSHA Hazard Communication Standard 2024 (29 CFR 1910.1200)

## 1. Identification

**Product Name** 1-Ethynyl-1-cyclohexanol

**Cat No. :** AC119100000; AC119100025; AC119100050; AC119101000; AC119105000

**CAS No** 78-27-3  
**Synonyms** No information available

**Recommended Use** Laboratory chemicals.  
**Uses advised against** Food, drug, pesticide or biocidal product use.

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

#### Company

Fisher Scientific Company  
One Reagent Lane  
Fair Lawn, NJ 07410  
Tel: (201) 796-7100

Acros Organics  
One Reagent Lane  
Fair Lawn, NJ 07410

#### **Emergency Telephone Number**

For information **US** call: 001-800-227-6701 / **Europe** call: +32 14 57 52 11

Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99

**CHEMTREC** Tel. No. **US**:001-800-424-9300 / **Europe**:001-703-527-3887

## 2. Hazard(s) identification

### Classification

This chemical is considered hazardous according to [US] OSHA (29 CFR 1910.1200, 2024)

|                                   |            |
|-----------------------------------|------------|
| Acute oral toxicity               | Category 4 |
| Acute dermal toxicity             | Category 3 |
| Skin Corrosion/Irritation         | Category 2 |
| Serious Eye Damage/Eye Irritation | Category 2 |

### Label Elements

#### **Signal Word**

Danger

#### **Hazard Statements**

Harmful if swallowed  
Toxic in contact with skin  
Causes skin irritation  
Causes serious eye irritation

**Precautionary Statements****Prevention**

Wash face, hands and any exposed skin thoroughly after handling  
Do not eat, drink or smoke when using this product  
Wear protective gloves/protective clothing/eye protection/face protection

**Skin**

IF ON SKIN: Wash with plenty of soap and water  
Call a POISON CENTER or doctor if you feel unwell  
Take off immediately all contaminated clothing  
Take off contaminated clothing and wash before reuse  
If skin irritation occurs: Get medical advice/attention

**Eyes**

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
If eye irritation persists: Get medical advice/attention

**Ingestion**

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell  
Rinse mouth

**Storage**

Store locked up

**Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**

None identified

**Hazards classified under paragraph (d)(1)(ii) of 1910.1200**

No information available

### 3. Composition/information on Ingredients

| Component                | CAS No  | Weight % |
|--------------------------|---------|----------|
| Cyclohexanol, 1-ethynyl- | 78-27-3 | >95      |

### 4. First-aid measures

**General Advice**

Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

**Eye Contact**

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

**Skin Contact**

Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.

|  |  |
|--|--|
| <b>Inhalation</b>                          | Remove to fresh air. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required. If not breathing, give artificial respiration. |
| <b>Ingestion</b>                           | Do NOT induce vomiting. Call a physician or poison control center immediately.   |
| <b>Most important symptoms and effects</b> | No information available.  |
| <b>Notes to Physician</b>                  | Treat symptomatically  |

## 5. Fire-fighting measures

|   |   |
|---|---|
| <b>Suitable Extinguishing Media</b>     | Water spray, carbon dioxide (CO <sub>2</sub> ), dry chemical, alcohol-resistant foam. Water mist may be used to cool closed containers. |
| <b>Unsuitable Extinguishing Media</b>   | No information available  |
| <b>Flash Point</b>                      | 73 °C / 163.4 °F  |
| <b>Method -</b>                         | No information available  |
| <b>Autoignition Temperature</b>         | 365 °C / 689 °F   |
| <b>Explosion Limits</b>                 |   |
| <b>Upper</b>                            | 8.70%   |
| <b>Lower</b>                            | 1.30%   |
| <b>Sensitivity to Mechanical Impact</b> | No information available  |
| <b>Sensitivity to Static Discharge</b>  | No information available  |

### Specific Hazards Arising from the Chemical

Flammable. Combustible material. Combustible material. Containers may explode when heated.

### Hazardous Combustion Products

Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>). Acetylene.

### Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

### NFPA

**Health**  
3

**Flammability**  
0

**Instability**  
0

**Physical hazards**  
N/A

## 6. Accidental release measures

|   |  |
|---|--|
| <b>Personal Precautions</b>                 | Use personal protective equipment as required. Ensure adequate ventilation. Avoid dust formation. Keep people away from and upwind of spill/leak. Evacuate personnel to safe areas. Remove all sources of ignition. Take precautionary measures against static discharges. |
| <b>Environmental Precautions</b>            | Should not be released into the environment. See Section 12 for additional Ecological Information.   |
| <b>Methods for Containment and Clean Up</b> | Sweep up and shovel into suitable containers for disposal. Avoid dust formation. Remove all sources of ignition.   |

## 7. Handling and Storage

|                 |  |
|-----------------|--|
| <b>Handling</b> | Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Avoid dust formation. Use only under a chemical fume hood. Do not breathe (dust, vapor, mist, gas). Do not ingest. If swallowed then seek immediate medical assistance. |
|-----------------|--|

Keep away from open flames, hot surfaces and sources of ignition.

**Storage.**

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks and flame. Incompatible Materials. Alkaline. Bases. Strong oxidizing agents. Strong acids. Finely powdered metals. Strong reducing agents. Acid anhydrides. Acid chlorides.

## 8. Exposure controls / personal protection

**Exposure Guidelines**

This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

**Engineering Measures**

Use explosion-proof electrical/ventilating/lighting equipment. Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation, especially in confined areas.

**Personal Protective Equipment****Eye/face Protection**

Tight sealing safety goggles.

**Skin and body protection**

Wear appropriate protective gloves and clothing to prevent skin exposure.

**Respiratory Protection**

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

**Recommended Filter type:**

Particulates filter conforming to EN 143.

**Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice.

## 9. Physical and chemical properties

**Appearance****Physical State**

Solid

**Color**

Clear

**Odor**

No information available

**Odor Threshold**

No information available

**Property****Values****Remarks****• Method****Melting Point/Range**

30 - 32 °C / 86 - 89.6 °F

**Softening Point**

No data available

**Boiling Point/Range**

180 °C / 356 °F

**Flash Point**

73 °C / 163.4 °F

**Flammability (liquid)**

Not applicable

**Flammability (solid,gas)**

No information available

**Explosion Limits**

**Lower** 1.3 vol%

**Upper** 8.7 vol%

**Autoignition Temperature**

365 °C / 689 °F

**Decomposition Temperature**

No data available

**pH**

7

**Viscosity**

Not applicable

**Water Solubility**

24.5 g/l (20°C)

**Solubility in other solvents**

No information available

**Partition Coefficient (n-octanol/water)****Component****log Pow**

Cyclohexanol, 1-ethynyl-

1.81

**Vapor Pressure**

1 mbar @ 50 °C

**Density / Specific Gravity**

0.976

@ 760 mmHg

**Method** - No information available

Solid

1 g/L aq.sol. (20°C)

Solid

|                                 |  |       |
|---------------------------------|--|-------|
| <b>Bulk Density</b>             | No data available                      |       |
| <b>Vapor Density</b>            | Not applicable                         | Solid |
| <b>Particle characteristics</b> | No data available                      |       |
| <b>Other Information</b>        |  |       |
| <b>Molecular Formula</b>        | C <sub>8</sub> H <sub>12</sub> O       |       |
| <b>Molecular Weight</b>         | 124.18                                 |       |
| <b>Explosive Properties</b>     | explosive air/vapour mixtures possible |       |
| <b>Evaporation Rate</b>         | Not applicable - Solid                 |       |

## 10. Stability and reactivity

|   |   |
|---|---|
| <b>Reactive Hazard</b>                  | None known, based on information available  |
| <b>Stability</b>                        | Stable under normal conditions.   |
| <b>Conditions to Avoid</b>              | Excess heat. Incompatible products. Keep away from open flames, hot surfaces and sources of ignition.                                   |
| <b>Incompatible Materials</b>           | Alkaline, Bases, Strong oxidizing agents, Strong acids, Finely powdered metals, Strong reducing agents, Acid anhydrides, Acid chlorides |
| <b>Hazardous Decomposition Products</b> | Carbon monoxide (CO), Carbon dioxide (CO <sub>2</sub> ), Acetylene  |
| <b>Hazardous Polymerization</b>         | Hazardous polymerization does not occur.  |
| <b>Hazardous Reactions</b>              | None under normal processing.   |

## 11. Toxicological information

### Information on expected route of exposure

|                   |   |
|-------------------|---|
| <b>Inhalation</b> | May cause irritation of respiratory tract.          |
| <b>Ingestion</b>  | Ingestion may cause irritation to mucous membranes. |
| <b>Eyes</b>       | Irritating to eyes.                                 |
| <b>Skin</b>       | Irritating to skin.                                 |

### Toxicology data for the components

| Component                | LD50 Oral                | LD50 Dermal                  | LC50 Inhalation |
|--------------------------|--------------------------|------------------------------|-----------------|
| Cyclohexanol, 1-ethynyl- | LD50 = 600 µL/kg ( Rat ) | LD50 = 1000 mg/kg ( Rabbit ) | -               |

|   |  |
|---|--|
| <b>Toxicologically Synergistic Products</b>   | No information available   |
| <b>(b) skin corrosion/irritation;</b>         | Category 2   |
| <b>(c) serious eye damage/irritation;</b>     | Category 2   |
| <b>(d) respiratory or skin sensitization;</b> |  |
| <b>Respiratory</b>                            | Based on available data, the classification criteria are not met |
| <b>Skin</b>                                   | Based on available data, the classification criteria are not met |
| <b>(e) germ cell mutagenicity;</b>            | Based on available data, the classification criteria are not met |
|   | Not mutagenic in AMES Test                                       |

**(f) carcinogenicity;**

Based on available data, the classification criteria are not met

The table below indicates whether each agency has listed any ingredient as a carcinogen

| Component                | CAS No  | IARC       | NTP        | ACGIH      | OSHA       | Mexico     |
|--------------------------|---------|------------|------------|------------|------------|------------|
| Cyclohexanol, 1-ethynyl- | 78-27-3 | Not listed | Not listed | Not listed | Not listed | Not listed |

**(g) reproductive toxicity;**

Based on available data, the classification criteria are not met

**(h) STOT-single exposure;**

Based on available data, the classification criteria are not met

**(i) STOT-repeated exposure;**

Based on available data, the classification criteria are not met

**Target Organs**

None known.

**(j) aspiration hazard;**Not applicable  
Solid**Other Adverse Effects**

The toxicological properties have not been fully investigated.

**Symptoms / effects, both acute and delayed**

No information available.

**Other Adverse Effects**

The toxicological properties have not been fully investigated.

**Endocrine Disrupting Properties**

This product does not contain any known or suspected endocrine disruptors.

## 12. Ecological information

**Ecotoxicity**

Do not empty into drains. .

| Component                | Freshwater Algae | Freshwater Fish  | Microtox   | Water Flea |
|--------------------------|------------------|--|------------|------------|
| Cyclohexanol, 1-ethynyl- | Not listed       | LC50: = 256 mg/L, 96h flow-through (Pimephales promelas) | Not listed | Not listed |

**Persistence and Degradability**

Persistence is unlikely

**Bioaccumulation/ Accumulation**

No information available.

**Mobility**

Will likely be mobile in the environment due to its water solubility.

| Component                | log Pow |
|--------------------------|---------|
| Cyclohexanol, 1-ethynyl- | 1.81    |

## 13. Disposal considerations

**Waste Disposal Methods**

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

## 14. Transport information

**DOT**

|                             |                               |
|-----------------------------|-------------------------------|
| <b>UN-No</b>                | UN2811                        |
| <b>Hazard Class</b>         | 6.1                           |
| <b>Packing Group</b>        | III                           |
| <b>TDG</b>                  |                               |
| <b>UN-No</b>                | UN2811                        |
| <b>Hazard Class</b>         | 6.1                           |
| <b>Packing Group</b>        | III                           |
| <b>IATA</b>                 |                               |
| <b>UN-No</b>                | UN2811                        |
| <b>Proper Shipping Name</b> | TOXIC SOLID, ORGANIC, N.O.S.* |
| <b>Hazard Class</b>         | 6.1                           |
| <b>Packing Group</b>        | III                           |
| <b>IMDG/IMO</b>             |                               |
| <b>UN-No</b>                | UN2811                        |
| <b>Proper Shipping Name</b> | Toxic solid, organic, n.o.s.  |
| <b>Hazard Class</b>         | 6.1                           |
| <b>Packing Group</b>        | III                           |

## 15. Regulatory Information

### United States of America Inventory

| Component                | CAS No  | TSCA | TSCA Inventory notification -<br>Active-Inactive | TSCA - EPA Regulatory<br>Flags |
|--------------------------|---------|------|--|--------------------------------|
| Cyclohexanol, 1-ethynyl- | 78-27-3 | X    | ACTIVE   | -                              |

#### Legend:

**TSCA** US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

X - Listed

'-' - Not Listed

**TSCA - Per 40 CFR 751, Regulation of Certain Chemical Substances & Mixtures, Under TSCA Section 6(h) (PBT)**

Not applicable

**TSCA 12(b)** - Notices of Export

Not applicable

### International Inventories

Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Japan (ISHL), Australia (AICS), China (IECSC), Korea (KECL).

| Component                | CAS No  | DSL | NDSL | EINECS    | PICCS | ENCS | ISHL | AICS | IECSC | KECL     |
|--------------------------|---------|-----|------|-----------|-------|------|------|------|-------|----------|
| Cyclohexanol, 1-ethynyl- | 78-27-3 | X   | -    | 201-100-9 | X     | X    | X    | X    | X     | KE-14086 |

**KECL** - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

### U.S. Federal Regulations

#### SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

#### SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

**CWA (Clean Water Act)** Not applicable

**Clean Air Act** Not applicable

**OSHA - Occupational Safety and** Not applicable

Health Administration

**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

**U.S. State Right-to-Know Regulations**

Not applicable

**U.S. Department of Transportation**

Reportable Quantity (RQ): N  
 DOT Marine Pollutant N  
 DOT Severe Marine Pollutant N

**U.S. Department of Homeland Security**

This product does not contain any DHS chemicals.

**Other International Regulations****Mexico - Grade**

Moderate risk, Grade 2

**Authorisation/Restrictions according to EU REACH**

Not applicable

| Component                | CAS No  | REACH (1907/2006) - Annex XIV - Substances Subject to Authorization | REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances | REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC) |
|--------------------------|---------|---|---|---|
| Cyclohexanol, 1-ethynyl- | 78-27-3 | -   | -   | -   |

**Safety, health and environmental regulations/legislation specific for the substance or mixture**

| Component                | CAS No  | OECD HPV       | Persistent Organic Pollutant | Ozone Depletion Potential | Restriction of Hazardous Substances (RoHS) |
|--------------------------|---------|----------------|------------------------------|---------------------------|--|
| Cyclohexanol, 1-ethynyl- | 78-27-3 | Not applicable | Not applicable               | Not applicable            | Not applicable                             |

**Contains component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS)?**

Not applicable

**Other International Regulations**

| Component                | CAS No  | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements | Rotterdam Convention (PIC) | Basel Convention (Hazardous Waste) |
|--------------------------|---------|---|--|----------------------------|------------------------------------|
| Cyclohexanol, 1-ethynyl- | 78-27-3 | Not applicable  | Not applicable   | Not applicable             | Not applicable                     |



## 16. Other Information

|                  |   |
|------------------|---|
| Prepared By      | Product stewardship (Regulatory Affairs)<br>Thermo Fisher Scientific<br>email - begel.sdsdesk@thermofisher.com  |
| Creation Date    | 16-Nov-2010   |
| Revision Date    | 18-Dec-2025   |
| Print Date       | 18-Dec-2025   |
| Revision Summary | Updated to the U.S. Department of Labor's Occupational Safety and Health Administration (OSHA) which published its Final Rule in the Federal Register revising the Hazard Communication Standard (HCS/HazCom), 29 CFR 1910.1200 (2024) (HCS §1910.1200, 2024), May 20, 2024, effective July 19, 2024. |

### Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

**End of SDS**