

# SAFETY DATA SHEET

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** 1,4-Dichloro-2-butyne

**Cat No. :** AC113280000; AC113280250; AC113281000

**CAS No** 821-10-3  
**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 3 |
| Acute dermal toxicity                            | Category 3 |
| Acute Inhalation Toxicity - Vapors               | Category 3 |
| Skin Corrosion/Irritation                        | Category 2 |
| Serious Eye Damage/Eye Irritation                | Category 2 |
| Carcinogenicity                                  | Category 2 |
| Specific target organ toxicity (single exposure) | Category 3 |
| Target Organs - Respiratory system.              |            |

### Label Elements

**Signal Word**

Danger

**Hazard Statements**

Causes skin irritation  
Causes serious eye irritation  
May cause respiratory irritation  
Suspected of causing cancer  
Toxic if swallowed, in contact with skin or if inhaled

**Precautionary Statements****Prevention**

Obtain special instructions before use  
Do not handle until all safety precautions have been read and understood  
Wash face, hands and any exposed skin thoroughly after handling  
Do not eat, drink or smoke when using this product  
Avoid breathing dust/fume/gas/mist/vapors/spray  
Use only outdoors or in a well-ventilated area  
Wear eye/face protection  
Wear protective gloves/protective clothing/eye protection/face protection

**Response**

IF exposed or concerned: Get medical attention/advice

**Inhalation**

IF INHALED: Remove person to fresh air and keep comfortable for breathing  
Call a POISON CENTER or doctor

**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: Immediately call a POISON CENTER or doctor  
Rinse mouth

**Storage**

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

**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 % |
|-----------|--------|----------|
|-----------|--------|----------|

|                         |          |    |
|-------------------------|----------|----|
| 2-Butyne, 1,4-dichloro- | 821-10-3 | 99 |
|-------------------------|----------|----|

#### 4. First-aid measures

|                                            |                                                                                                                                                                                      |
|--------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Eye Contact</b>                         | Immediate medical attention is required. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.                                                    |
| <b>Skin Contact</b>                        | Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Immediate medical attention is required.                                       |
| <b>Inhalation</b>                          | Remove from exposure, lie down. Remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Immediate medical attention is required. |
| <b>Ingestion</b>                           | Call a physician immediately. Clean mouth with water.                                                                                                                                |
| <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. Chemical foam. |
| <b>Unsuitable Extinguishing Media</b>   | No information available                                                     |
| <b>Flash Point</b>                      | 160 °C / 320 °F                                                              |
| <b>Method -</b>                         | No information available                                                     |
| <b>Autoignition Temperature</b>         | No information available                                                     |
| <b>Explosion Limits</b>                 |                                                                              |
| <b>Upper</b>                            | No data available                                                            |
| <b>Lower</b>                            | No data available                                                            |
| <b>Sensitivity to Mechanical Impact</b> | No information available                                                     |
| <b>Sensitivity to Static Discharge</b>  | No information available                                                     |

#### Specific Hazards Arising from the Chemical

Keep product and empty container away from heat and sources of ignition.

#### Hazardous Combustion Products

Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>). Hydrogen chloride gas.

#### 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.

#### NFPA

**Health**  
3

**Flammability**  
0

**Instability**  
0

**Physical hazards**  
N/A

#### 6. Accidental release measures

|                                             |                                                                                                                                                          |
|---------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Personal Precautions</b>                 | Ensure adequate ventilation. Use personal protective equipment as required.                                                                              |
| <b>Environmental Precautions</b>            | See Section 12 for additional Ecological Information.                                                                                                    |
| <b>Methods for Containment and Clean Up</b> | Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal. |

#### 7. Handling and Storage

|                 |                                                                                                                                                                     |
|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Handling</b> | Do not breathe mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Handle product only in closed system or provide appropriate exhaust ventilation.     |
| <b>Storage.</b> | Keep in a dry place. Keep container tightly closed. Protect from direct sunlight. Keep refrigerated. Incompatible Materials. Strong oxidizing agents. Strong bases. |

## 8. Exposure controls / personal protection

|                                      |                                                                                                                                                                                                                                                   |
|--------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Exposure Guidelines</b>           | This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.                                                                                                     |
| <b>Engineering Measures</b>          | Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.                                                                                                 |
| <b>Personal Protective Equipment</b> |                                                                                                                                                                                                                                                   |
| <b>Eye/face Protection</b>           | Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.                                                                       |
| <b>Skin and body protection</b>      | Wear appropriate protective gloves and clothing to prevent skin exposure.                                                                                                                                                                         |
| <b>Respiratory Protection</b>        | 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. |
| <b>Recommended Filter type:</b>      | Organic gases and vapours filter. Type A. Brown. conforming to EN14387.                                                                                                                                                                           |
| <b>Hygiene Measures</b>              | Handle in accordance with good industrial hygiene and safety practice.                                                                                                                                                                            |

## 9. Physical and chemical properties

|                                                |                               |                                          |
|------------------------------------------------|-------------------------------|------------------------------------------|
| <b>Appearance</b>                              |                               |                                          |
| <b>Physical State</b>                          | Liquid                        |                                          |
| <b>Color</b>                                   | Clear                         |                                          |
| <b>Odor</b>                                    | No information available      |                                          |
| <b>Odor Threshold</b>                          | No information available      |                                          |
| <b>Property</b>                                | <b>Values</b>                 | <b>Remarks      • Method</b>             |
| <b>Melting Point/Range</b>                     | No data available             |                                          |
| <b>Softening Point</b>                         | No data available             |                                          |
| <b>Boiling Point/Range</b>                     | 165 - 168 °C / 329 - 334.4 °F |                                          |
| <b>Flash Point</b>                             | 160 °C / 320 °F               | <b>Method -</b> No information available |
| <b>Flammability (liquid)</b>                   | No data available             |                                          |
| <b>Flammability (solid,gas)</b>                | Not applicable                | Liquid                                   |
| <b>Explosion Limits</b>                        | No data available             |                                          |
| <b>Autoignition Temperature</b>                | No data available             |                                          |
| <b>Decomposition Temperature</b>               | No data available             |                                          |
| <b>pH</b>                                      | No data available             |                                          |
| <b>Viscosity</b>                               | No data available             |                                          |
| <b>Water Solubility</b>                        | No information available      |                                          |
| <b>Solubility in other solvents</b>            | No information available      |                                          |
| <b>Partition Coefficient (n-octanol/water)</b> |                               |                                          |
| <b>Vapor Pressure</b>                          | No data available             |                                          |
| <b>Density / Specific Gravity</b>              | 1.250                         |                                          |
| <b>Bulk Density</b>                            | Not applicable                | Liquid                                   |
| <b>Vapor Density</b>                           | No data available             | (Air = 1.0)                              |

**Particle characteristics** Not applicable (liquid)

**Other Information**

**Molecular Formula** C<sub>4</sub> H<sub>4</sub> Cl<sub>2</sub>  
**Molecular Weight** 122.98

## 10. Stability and reactivity

**Reactive Hazard** None known, based on information available

**Stability** Light sensitive.

**Conditions to Avoid** Exposure to light. Incompatible products.

**Incompatible Materials** Strong oxidizing agents, Strong bases

**Hazardous Decomposition Products** Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>), Hydrogen chloride gas

**Hazardous Polymerization** No information available.

**Hazardous Reactions** None under normal processing.

## 11. Toxicological information

### Information on expected route of exposure

**Inhalation** Not an expected route of exposure.  
**Ingestion** May be harmful if swallowed.  
**Eyes** Avoid contact with eyes. Irritating to eyes. Lachrymator (substance which increases the flow of tears).  
**Skin** Avoid contact with skin. May cause irritation. Harmful in contact with skin.

### Toxicology data for the components

**Toxicologically Synergistic Products** No information available

**(b) skin corrosion/irritation;** Category 2

**(c) serious eye damage/irritation;** Category 2

**(d) respiratory or skin sensitization;**

**Respiratory** No data available  
**Skin** No data available

**(e) germ cell mutagenicity;** No data available

**(f) carcinogenicity;** Category 2

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

| Component               | CAS No   | IARC       | NTP        | ACGIH      | OSHA       | Mexico     |
|-------------------------|----------|------------|------------|------------|------------|------------|
| 2-Butyne, 1,4-dichloro- | 821-10-3 | Not listed | Not listed | Not listed | Not listed | Not listed |

**(g) reproductive toxicity;** No data available

|                                            |                                                                                                                    |
|--------------------------------------------|--------------------------------------------------------------------------------------------------------------------|
| (h) STOT-single exposure;                  | Category 3                                                                                                         |
| Results / Target organs                    | Respiratory system.                                                                                                |
| (i) STOT-repeated exposure;                | No data available                                                                                                  |
| Target Organs                              | No information available.                                                                                          |
| (j) aspiration hazard;                     | No data available                                                                                                  |
| Other Adverse Effects                      | The toxicological properties have not been fully investigated. See actual entry in RTECS for complete information  |
| Symptoms / effects, both acute and delayed | No information available.                                                                                          |
| Other Adverse Effects                      | The toxicological properties have not been fully investigated. See actual entry in RTECS for complete information. |
| Endocrine Disrupting Properties            | This product does not contain any known or suspected endocrine disruptors.                                         |

## 12. Ecological information

### Ecotoxicity

Do not empty into drains.

|                               |                           |
|-------------------------------|---------------------------|
| Persistence and Degradability | No information available  |
| Bioaccumulation/ Accumulation | No information available. |
| Mobility                      | No information available. |

## 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

|                      |                                |
|----------------------|--------------------------------|
| <u>DOT</u>           | Not regulated                  |
| <u>TDG</u>           | Not regulated                  |
| <u>IATA</u>          |                                |
| UN-No                | UN2810                         |
| Proper Shipping Name | TOXIC LIQUID, ORGANIC, N.O.S.* |
| Hazard Class         | 6.1                            |
| Packing Group        | II                             |
| <u>IMDG/IMO</u>      |                                |
| UN-No                | UN2810                         |
| Proper Shipping Name | Toxic liquid, organic, n.o.s.  |
| Hazard Class         | 6.1                            |
| Packing Group        | II                             |

## 15. Regulatory Information

### United States of America Inventory

| Component               | CAS No   | TSCA | TSCA Inventory notification -<br>Active-Inactive | TSCA - EPA Regulatory<br>Flags |
|-------------------------|----------|------|--------------------------------------------------|--------------------------------|
| 2-Butyne, 1,4-dichloro- | 821-10-3 | 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    |
|-------------------------|----------|-----|------|-----------|-------|------|------|------|-------|---------|
| 2-Butyne, 1,4-dichloro- | 821-10-3 | -   | X    | 212-474-8 | -     | -    | X    | -    | -     | 97-3-61 |

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 Health Administration

Not applicable

**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**

This product does not contain any DHS chemicals.

## Security

Other International Regulations

Mexico - Grade No information available

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) |
|-------------------------|----------|---------------------------------------------------------------------|-------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| 2-Butyne, 1,4-dichloro- | 821-10-3 | -                                                                   | -                                                                             | -                                                                                                     |

## 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) |
|-------------------------|----------|----------------|------------------------------|---------------------------|--------------------------------------------|
| 2-Butyne, 1,4-dichloro- | 821-10-3 | Not applicable | Not applicable               | Not applicable            | Not applicable                             |

Contains component(s) that meet a 'definition' of per &amp; 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) |
|-------------------------|----------|-------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|----------------------------|------------------------------------|
| 2-Butyne, 1,4-dichloro- | 821-10-3 | Not applicable                                                                            | Not applicable                                                                           | Not applicable             | Annex I - Y45                      |

## 16. Other Information

Prepared By Product stewardship (Regulatory Affairs)  
Thermo Fisher Scientific  
email - begel.sdsdesk@thermofisher.com

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**