

# SAFETY DATA SHEET

Creation Date 05-May-2009

Revision Date 18-Dec-2025

Revision Number 7

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-Dioxane

**Cat No. :** AC117110000; AC117110010; AC117110025; AC117110050;  
AC117110250

**CAS No** 123-91-1  
**Synonyms** Diox

**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)

|                                                                   |             |
|-------------------------------------------------------------------|-------------|
| Flammable liquids                                                 | Category 2  |
| Serious Eye Damage/Eye Irritation                                 | Category 2  |
| Carcinogenicity                                                   | Category 1B |
| Specific target organ toxicity (single exposure)                  | Category 3  |
| Target Organs - Respiratory system, Central nervous system (CNS). |             |

### Label Elements

#### **Signal Word**

Danger

#### **Hazard Statements**

Highly flammable liquid and vapor  
Causes serious eye irritation  
May cause respiratory irritation  
May cause cancer

**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  
Wear eye/face protection  
Avoid breathing dust/fume/gas/mist/vapors/spray  
Use only outdoors or in a well-ventilated area  
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking  
Keep container tightly closed  
Ground and bond container and receiving equipment  
Use explosion-proof electrical/ventilating/lighting equipment  
Keep cool  
Wear protective gloves/protective clothing/eye protection/face protection  
Take action to prevent static discharges  
Use non-sparking tools

**Response**

IF exposed or concerned: Get medical attention/advice

**Inhalation**

IF INHALED: Remove person to fresh air and keep comfortable for breathing

**Skin**

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower

**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

**Fire**

In case of fire: Use CO<sub>2</sub>, dry chemical, or foam to extinguish

**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)**

Repeated exposure may cause skin dryness or cracking

**Hazards classified under paragraph (d)(1)(ii) of 1910.1200****Hazards resulting from a reaction with other chemicals under normal conditions of use**

May form explosive peroxides.

**Other hazards**

Contains a known or suspected endocrine disruptor.  
WARNING. Cancer - <https://www.p65warnings.ca.gov/>.

### 3. Composition/information on Ingredients

| Component   | CAS No   | Weight % |
|-------------|----------|----------|
| 1,4-Dioxane | 123-91-1 | >95      |

#### 4. First-aid measures

|                                            |                                                                                                                       |
|--------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|
| <b>General Advice</b>                      | If symptoms persist, call a physician.                                                                                |
| <b>Eye Contact</b>                         | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.       |
| <b>Skin Contact</b>                        | Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.     |
| <b>Inhalation</b>                          | Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur.          |
| <b>Ingestion</b>                           | Clean mouth with water and drink afterwards plenty of water.                                                          |
| <b>Most important symptoms and effects</b> | . Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting |
| <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>   | Water may be ineffective                                                                                                                |
| <b>Flash Point</b>                      | 12 °C / 53.6 °F                                                                                                                         |
| <b>Method -</b>                         | No information available                                                                                                                |
| <b>Autoignition Temperature</b>         | 355 °C / 671 °F                                                                                                                         |
| <b>Explosion Limits</b>                 |                                                                                                                                         |
| <b>Upper</b>                            | 22%                                                                                                                                     |
| <b>Lower</b>                            | 2%                                                                                                                                      |
| <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. Risk of ignition. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Containers may explode when heated. May form explosive peroxides. Vapors may form explosive mixtures with air.

#### Hazardous Combustion Products

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

#### 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  
2

Flammability  
3

Instability  
1

Physical hazards  
N/A

#### 6. Accidental release measures

|                             |                                                                                        |
|-----------------------------|----------------------------------------------------------------------------------------|
| <b>Personal Precautions</b> | Use personal protective equipment as required. Ensure adequate ventilation. Remove all |
|-----------------------------|----------------------------------------------------------------------------------------|

**Environmental Precautions** sources of ignition. Take precautionary measures against static discharges. Should not be released into the environment.

**Methods for Containment and Clean Up** Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

## 7. Handling and Storage

**Handling** Wear personal protective equipment/face protection. Ensure adequate ventilation. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Take precautionary measures against static discharges. If peroxide formation is suspected, do not open or move container. Keep away from open flames, hot surfaces and sources of ignition. Use only non-sparking tools.

**Storage.** Keep containers tightly closed in a dry, cool and well-ventilated place. Store under an inert atmosphere. Flammables area. May form explosive peroxides. Containers should be dated when opened and tested periodically for the presence of peroxides. Should crystals form in a peroxidizable liquid, peroxidation may have occurred and the product should be considered extremely dangerous. In this instance, the container should only be opened remotely by professionals. Keep away from heat, sparks and flame. Air sensitive. Incompatible Materials. Strong oxidizing agents. Reducing Agent. Halogens.

## 8. Exposure controls / personal protection

### Exposure Guidelines

| Component   | ACGIH TLV           | OSHA PEL                                                                                                           | NIOSH                                                             | Mexico OEL (TWA) |
|-------------|---------------------|--------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|------------------|
| 1,4-Dioxane | TWA: 20 ppm<br>Skin | (Vacated) TWA: 25 ppm<br>(Vacated) TWA: 90 mg/m <sup>3</sup><br>Skin<br>TWA: 100 ppm<br>TWA: 360 mg/m <sup>3</sup> | IDLH: 500 ppm<br>Ceiling: 1 ppm<br>Ceiling: 3.6 mg/m <sup>3</sup> | TWA: 20 ppm      |

### Legend

ACGIH - American Conference of Governmental Industrial Hygienists

OSHA - Occupational Safety and Health Administration

NIOSH: NIOSH - National Institute for Occupational Safety and Health

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

### Personal Protective Equipment

**Eye/face Protection** 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.

**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:** Organic gases and vapours filter. Type A. Brown. conforming to EN14387.

**Hygiene Measures** 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>                                   | Colorless                                   |                                          |                 |
| <b>Odor</b>                                    | Petroleum distillates                       |                                          |                 |
| <b>Odor Threshold</b>                          | No information available                    |                                          |                 |
| <b>Property</b>                                | <b>Values</b>                               | <b>Remarks</b>                           | <b>• Method</b> |
| <b>Melting Point/Range</b>                     | 12 °C / 53.6 °F                             |                                          |                 |
| <b>Softening Point</b>                         | No data available                           |                                          |                 |
| <b>Boiling Point/Range</b>                     | 101 °C / 213.8 °F                           | @ 760 mmHg                               |                 |
| <b>Flash Point</b>                             | 12 °C / 53.6 °F                             | <b>Method</b> - No information available |                 |
| <b>Flammability (liquid)</b>                   | Highly flammable                            | On basis of test data                    |                 |
| <b>Flammability (solid,gas)</b>                | Not applicable                              | Liquid                                   |                 |
| <b>Explosion Limits</b>                        | <b>Lower</b> 2 vol%                         |                                          |                 |
|                                                | <b>Upper</b> 22 vol%                        |                                          |                 |
| <b>Autoignition Temperature</b>                | 355 °C / 671 °F                             |                                          |                 |
| <b>Decomposition Temperature</b>               | No data available                           |                                          |                 |
| <b>pH</b>                                      | 6-8                                         | 500 g/l aq.sol                           |                 |
| <b>Viscosity</b>                               | 1.32 mPa.s @ 20 °C                          |                                          |                 |
| <b>Water Solubility</b>                        | Soluble                                     |                                          |                 |
| <b>Solubility in other solvents</b>            | No information available                    |                                          |                 |
| <b>Partition Coefficient (n-octanol/water)</b> |                                             |                                          |                 |
| <b>Component</b>                               | <b>log Pow</b>                              |                                          |                 |
| 1,4-Dioxane                                    | -0.42                                       |                                          |                 |
| <b>Vapor Pressure</b>                          | 41 mbar @ 20 °C                             |                                          |                 |
| <b>Density / Specific Gravity</b>              | 1.034                                       |                                          |                 |
| <b>Bulk Density</b>                            | Not applicable                              | Liquid                                   |                 |
| <b>Vapor Density</b>                           | 3                                           | (Air = 1.0)                              |                 |
| <b>Particle characteristics</b>                | Not applicable (liquid)                     |                                          |                 |
| <b>Other Information</b>                       |                                             |                                          |                 |
| <b>Molecular Formula</b>                       | C4 H8 O2                                    |                                          |                 |
| <b>Molecular Weight</b>                        | 88.11                                       |                                          |                 |
| <b>Explosive Properties</b>                    | Vapors may form explosive mixtures with air |                                          |                 |

## 10. Stability and reactivity

|                                         |                                                                                                                                                                                                       |
|-----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Reactive Hazard</b>                  | None known, based on information available                                                                                                                                                            |
| <b>Stability</b>                        | May form explosive peroxides. Hygroscopic.                                                                                                                                                            |
| <b>Conditions to Avoid</b>              | Incompatible products. Heat, flames and sparks. Exposure to air or moisture over prolonged periods. Keep away from open flames, hot surfaces and sources of ignition. Exposure to moist air or water. |
| <b>Incompatible Materials</b>           | Strong oxidizing agents, Reducing Agent, Halogens                                                                                                                                                     |
| <b>Hazardous Decomposition Products</b> | Carbon monoxide (CO), Carbon dioxide (CO <sub>2</sub> ), peroxides                                                                                                                                    |
| <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

**Inhalation** Not an expected route of exposure.  
**Ingestion** May be harmful if swallowed.  
**Eyes** Avoid contact with eyes. Irritating to eyes.  
**Skin** Avoid contact with skin. May cause irritation.

**Toxicology data for the components**

| Component   | LD50 Oral                                | LD50 Dermal                  | LC50 Inhalation       |
|-------------|------------------------------------------|------------------------------|-----------------------|
| 1,4-Dioxane | 5170 mg/kg ( Rat )<br>4200 mg/kg ( Rat ) | LD50 = 7600 mg/kg ( Rabbit ) | 48.5 mg/L ( Rat ) 4 h |

**Toxicologically Synergistic Products** Acetonitrile; Tetrachloroethylene

**(b) skin corrosion/irritation;** Based on available data, the classification criteria are not met

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

**(d) respiratory or skin sensitization;**  
**Respiratory** Based on available data, the classification criteria are not met  
**Skin** Based on available data, the classification criteria are not met

**(e) germ cell mutagenicity;** Based on available data, the classification criteria are not met

**(f) carcinogenicity;** Category 1B  
The table below indicates whether each agency has listed any ingredient as a carcinogen

| Component   | CAS No   | IARC     | NTP                    | ACGIH | OSHA | Mexico |
|-------------|----------|----------|------------------------|-------|------|--------|
| 1,4-Dioxane | 123-91-1 | Group 2B | Reasonably Anticipated | A3    | X    | A3     |

*IARC (International Agency for Research on Cancer)*

*IARC (International Agency for Research on Cancer)*

*Group 1 - Carcinogenic to Humans*

*Group 2A - Probably Carcinogenic to Humans*

*Group 2B - Possibly Carcinogenic to Humans*

*NTP: (National Toxicity Program)*

*NTP: (National Toxicity Program)*

*Known - Known Carcinogen*

*Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen*

*ACGIH: (American Conference of Governmental Industrial Hygienists)*

*A1 - Known Human Carcinogen*

*A2 - Suspected Human Carcinogen*

*A3 - Animal Carcinogen*

*Mexico - Occupational Exposure Limits - Carcinogens*

*ACGIH: (American Conference of Governmental Industrial Hygienists)*

*Mexico - Occupational Exposure Limits - Carcinogens*

*A1 - Confirmed Human Carcinogen*

*A2 - Suspected Human Carcinogen*

*A3 - Confirmed Animal Carcinogen*

*A4 - Not Classifiable as a Human Carcinogen*

*A5 - Not Suspected as a Human Carcinogen*

**(g) reproductive toxicity;** Based on available data, the classification criteria are not met

**(h) STOT-single exposure;** Category 3

**Results / Target organs** Respiratory system.

**(i) STOT-repeated exposure;** Based on available data, the classification criteria are not met

**Target Organs**

None known.

**(j) aspiration hazard;**

Based on available data, the classification criteria are not met

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

Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.

**Other Adverse Effects**

The toxicological properties have not been fully investigated.

**Endocrine Disrupting Properties  
Assess endocrine disrupting  
properties for human health**

.

Included in the list established in accordance with Article 59(1) for having endocrine disrupting properties Substance identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

## 12. Ecological information

**Ecotoxicity**

| Component   | Freshwater Algae | Freshwater Fish                                                                                                                                                                                                                                                                              | Microtox                                                                  | Water Flea          |
|-------------|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|---------------------|
| 1,4-Dioxane | Not listed       | LC50: = 9850 mg/L, 96h (Pimephales promelas)<br>LC50: 10306 - 14742 mg/L, 96h static (Pimephales promelas)<br>LC50: = 9850 mg/L, 96h flow-through (Pimephales promelas)<br>LC50: > 10000 mg/L, 96h semi-static (Lepomis macrochirus)<br>LC50: > 10000 mg/L, 96h static (Lepomis macrochirus) | EC50 = 610 mg/L 5 min<br>EC50 = 668 mg/L 15 min<br>EC50 = 733 mg/L 30 min | EC50 = 163 mg/L 48h |

**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 |
|-------------|---------|
| 1,4-Dioxane | -0.42   |

## 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.

| Component              | RCRA - U Series Wastes | RCRA - P Series Wastes |
|------------------------|------------------------|------------------------|
| 1,4-Dioxane - 123-91-1 | U108                   | -                      |

## 14. Transport information

**DOT**

|                      |         |
|----------------------|---------|
| UN-No                | UN1165  |
| Proper Shipping Name | DIOXANE |
| Hazard Class         | 3       |
| Packing Group        | II      |

**TDG**

UN-No UN1165  
 Proper Shipping Name DIOXANE  
 Hazard Class 3  
 Packing Group II

**IATA**

UN-No UN1165  
 Proper Shipping Name DIOXANE  
 Hazard Class 3  
 Packing Group II

**IMDG/IMO**

UN-No UN1165  
 Proper Shipping Name DIOXANE  
 Hazard Class 3  
 Packing Group II

## 15. Regulatory Information

**United States of America Inventory**

| Component   | CAS No   | TSCA | TSCA Inventory notification - Active-Inactive | TSCA - EPA Regulatory Flags |
|-------------|----------|------|-----------------------------------------------|-----------------------------|
| 1,4-Dioxane | 123-91-1 | 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     |
|-------------|----------|-----|------|-----------|-------|------|------|------|-------|----------|
| 1,4-Dioxane | 123-91-1 | X   | -    | 204-661-8 | X     | X    | X    | X    | X     | KE-10463 |

**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 contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

| Component   | CAS No   | Weight % | SARA 313 - Threshold Values % | SARA 313 - Reporting thresholds |
|-------------|----------|----------|-------------------------------|---------------------------------|
| 1,4-Dioxane | 123-91-1 | >95      | 0.1 %                         | -                               |

**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**

| Component | HAPS Data | Class 1 Ozone Depletors | Class 2 Ozone Depletors |
|-----------|-----------|-------------------------|-------------------------|
|-----------|-----------|-------------------------|-------------------------|

|             |   |  |   |
|-------------|---|--|---|
| 1,4-Dioxane | X |  | - |
|-------------|---|--|---|

OSHA - Occupational Safety and Health Administration Not applicable

**CERCLA**

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355).

| Component   | Hazardous Substances RQs | CERCLA Extremely Hazardous Substances RQs | SARA Reportable Quantity (RQ) |
|-------------|--------------------------|-------------------------------------------|-------------------------------|
| 1,4-Dioxane | 100 lb                   | -                                         | 100 lb<br>45.4 kg             |

**California Proposition 65** This product contains the following Proposition 65 chemicals.

| Component   | CAS No   | California Prop. 65 | Prop 65 NSRL | Category   |
|-------------|----------|---------------------|--------------|------------|
| 1,4-Dioxane | 123-91-1 | Carcinogen          | 30 µg/day    | Carcinogen |

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

| Component   | Massachusetts | New Jersey | Pennsylvania | Illinois | Rhode Island |
|-------------|---------------|------------|--------------|----------|--------------|
| 1,4-Dioxane | X             | X          | X            | X        | X            |

**U.S. Department of Transportation**

Reportable Quantity (RQ): Y  
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** Serious risk, Grade 3

**Authorisation/Restrictions according to EU REACH**

| 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)                                                                                                                                                                                          |
|-------------|----------|---------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1,4-Dioxane | 123-91-1 | -                                                                   | Use restricted. See entry 75.<br>(see link for restriction details)<br>Use restricted. See entry 28.<br>(see link for restriction details) | SVHC Candidate list - 204-661-8 - Carcinogenic (Article 57a)<br><br>Equivalent level of concern having probable serious effects to the environment (Article 57f - environment)<br><br>Equivalent level of concern having probable serious effects to human health (Article 57f - human health) |

After the sunset date the use of this substance requires either an authorization or can only be used for exempted uses, e.g. use in scientific research and development which includes routine analytics or use as intermediate.

## REACH links

<https://echa.europa.eu/substances-restricted-under-reach><https://echa.europa.eu/candidate-list-table><https://echa.europa.eu/authorisation-list>

## 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) |
|-------------|----------|----------|------------------------------|---------------------------|--------------------------------------------|
| 1,4-Dioxane | 123-91-1 | Listed   | 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) |
|-------------|----------|-------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|----------------------------|------------------------------------|
| 1,4-Dioxane | 123-91-1 | Not applicable                                                                            | Not applicable                                                                           | Not applicable             | Not applicable                     |

## 16. Other Information

## Prepared By

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

## Creation Date

05-May-2009

## 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**