



SAFETY DATA SHEET

Creation Date 19-Apr-2018

Revision Date 28-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 | TRIS, 1.0M Buffer Solution, pH 6.8 |
| Cat No. : | J63831 |
| Synonyms | No information available |
| Recommended Use Uses advised against | Laboratory chemicals. Food, drug, pesticide or biocidal product use. |

Details of the supplier of the safety data sheet

Company

Thermo Fisher Scientific Chemicals, Inc.
30 Bond Street
Ward Hill, MA 01835-8099
Tel: 800-343-0660
Fax: 800-322-4757

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

Classification according to [US] OSHA (29 CFR 1910.1200, 2024)

This product is not considered hazardous by the US OSHA Hazard Communication Standard 2024 (29 CFR 1910.1200).

Label Elements

None required

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 % |
|--|-----------|----------|
| Water | 7732-18-5 | 85 - 87 |
| 1,3-Propanediol, 2-amino-2-(hydroxymethyl)-, hydrochloride | 1185-53-1 | 1 - 16 |
| Tris (hydroxymethyl) aminomethane | 77-86-1 | 1 - 12 |

4. First-aid measures

| | |
|--|---|
| Eye Contact | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention. |
| Skin Contact | Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately if symptoms occur. |
| Inhalation | Remove to fresh air. Get medical attention immediately if symptoms occur. |
| Ingestion | Clean mouth with water and drink afterwards plenty of water. Get medical attention if symptoms occur. |
| Most important symptoms and effects | None reasonably foreseeable. |
| Notes to Physician | Treat symptomatically |

5. Fire-fighting measures

| | |
|---|--|
| Suitable Extinguishing Media | Carbon dioxide (CO ₂). Powder. Water spray. In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion. |
| Unsuitable Extinguishing Media | No information available |
| Flash Point | No information available |
| Method - | No information available |
| Autoignition Temperature | No information available |
| Explosion Limits | No information available |
| Upper | No data available |
| Lower | No data available |
| Sensitivity to Mechanical Impact | No information available |
| Sensitivity to Static Discharge | 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 (CO₂). Nitrogen oxides (NO_x). Hydrogen chloride.

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
0

Flammability
0

Instability
0

Physical hazards
-

6. Accidental release measures

| | |
|----------------------------------|--|
| Personal Precautions | Ensure adequate ventilation. Use personal protective equipment as required. |
| Environmental Precautions | Should not be released into the environment. See Section 12 for additional Ecological Information. |

Methods for Containment and Clean Up Sweep up and shovel into suitable containers for disposal.

7. Handling and Storage

| | |
|-----------------|---|
| Handling | Wear personal protective equipment/face protection. Ensure adequate ventilation. Avoid contact with skin, eyes or clothing. Avoid ingestion and inhalation. |
| Storage. | Keep containers tightly closed in a dry, cool and well-ventilated place. Incompatible Materials. Oxidizing agent. |

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 Ensure adequate ventilation, especially in confined areas.

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. |
| Hygiene Measures | Handle in accordance with good industrial hygiene and safety practice. |

9. Physical and chemical properties

Appearance

| | | |
|----------------------------------|--------------------------|--|
| Physical State | Liquid | |
| Color | Colorless | |
| Odor | Odorless | |
| Odor Threshold | No information available | |
| Property | Values | Remarks |
| Melting Point/Range | No data available | |
| Softening Point | No data available | |
| Boiling Point/Range | No information available | |
| Flash Point | No information available | Method - No information available |
| Flammability (liquid) | No data available | |
| Flammability (solid,gas) | Not applicable | Liquid |
| Explosion Limits | No data available | |
| Autoignition Temperature | No data available | |
| Decomposition Temperature | No data available | |
| pH | 6.5 - 9.5 | |
| Viscosity | No data available | |

| | |
|--|--|
| Water Solubility | Miscible |
| Solubility in other solvents | No information available |
| Partition Coefficient (n-octanol/water) | |
| Component | log Pow |
| 1,3-Propanediol, | -3.6 |
| 2-amino-2-(hydroxymethyl)-, hydrochloride | |
| Vapor Pressure | 23 hPa @ 20 °C |
| Density / Specific Gravity | No data available |
| Bulk Density | Not applicable |
| Vapor Density | No data available |
| Particle characteristics | Liquid (Air = 1.0) Not applicable (liquid) |

Other Information**10. Stability and reactivity**

| | |
|---|--|
| Reactive Hazard | None known, based on information available |
| Stability | Stable under normal conditions. |
| Conditions to Avoid | Incompatible products. |
| Incompatible Materials | Oxidizing agent |
| Hazardous Decomposition Products | Carbon monoxide (CO), Carbon dioxide (CO ₂), Nitrogen oxides (NO _x), Hydrogen chloride |
| Hazardous Polymerization | Hazardous polymerization does not occur. |
| Hazardous Reactions | None under normal processing. |

11. Toxicological information**Information on expected route of exposure**

| | |
|-------------------|--|
| Inhalation | Not an expected route of exposure. |
| Ingestion | No known effect based on information supplied. |
| Eyes | Not an expected route of exposure. |
| Skin | No known effect based on information supplied. |

Toxicology data for the components

| Component | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|---|--|--|-----------------|
| Water | - | - | - |
| 1,3-Propanediol, 2-amino-2-(hydroxymethyl)-, hydrochloride | OECD 425 (Rat) LD50 > 5000 mg/kg bw | OECD 402 (Rat) LD50 > 5000 mg/kg bw | - |
| Tris (hydroxymethyl) aminomethane | LD50 = 5900 mg/kg (Rat) | LD50 > 5000 mg/kg (Rat) | - |

Toxicologically Synergistic Products No information available

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

(c) serious eye damage/irritation; Based on available data, the classification criteria are not met

(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

| Component | Test method | Test species | Study result |
|---|-------------------------|--------------|-----------------|
| 1,3-Propanediol, 2-amino-2-(hydroxymethyl)-, hydrochloride 1185-53-1 (1 - 16) | OECD Test Guideline 406 | guinea pig | non-sensitising |

(e) germ cell mutagenicity;

Based on available data, the classification criteria are not met

| Component | Test method | Test species | Study result |
|---|--|-----------------------|--------------|
| 1,3-Propanediol, 2-amino-2-(hydroxymethyl)-, hydrochloride 1185-53-1 (1 - 16) | OECD Test Guideline 471 Bacterial Reverse Mutation Test | Mammalian in vitro | negative |

(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 |
|---|-----------|------------|------------|------------|------------|------------|
| Water | 7732-18-5 | Not listed |
| 1,3-Propanediol, 2-amino-2-(hydroxymethyl)-, hydrochloride | 1185-53-1 | Not listed |
| Tris (hydroxymethyl) aminomethane | 77-86-1 | 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

No information available.

(j) aspiration hazard;

Based on available data, the classification criteria are not met

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 |
|---|------------------|-----------------|-----------------------------------|---------------------------------------|
| 1,3-Propanediol, 2-amino-2-(hydroxymethyl)-, hydrochloride | Not listed | Not listed | OECD 209 EC50 > 1000 mg/L (3h) | Daphnia Magna EC50 >100 mg/L (48h) |

Persistence and Degradability Miscible with water Persistence is unlikely based on information available.

Bioaccumulation/ Accumulation No information available.

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

| Component | log Pow |
|--|---------|
| 1,3-Propanediol, 2-amino-2-(hydroxymethyl)-, hydrochloride | -3.6 |

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> | Not regulated |
| <u>IMDG/IMO</u> | Not regulated |

15. Regulatory Information

United States of America Inventory

| Component | CAS No | TSCA | TSCA Inventory notification - Active-Inactive | TSCA - EPA Regulatory Flags |
|--|-----------|------|---|-----------------------------|
| Water | 7732-18-5 | X | ACTIVE | - |
| 1,3-Propanediol, 2-amino-2-(hydroxymethyl)-, hydrochloride | 1185-53-1 | X | ACTIVE | - |
| Tris (hydroxymethyl) aminomethane | 77-86-1 | 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 |
|--|-----------|-----|------|-----------|-------|------|------|------|-------|----------|
| Water | 7732-18-5 | X | - | 231-791-2 | X | X | | X | X | KE-35400 |
| 1,3-Propanediol, 2-amino-2-(hydroxymethyl)-, hydrochloride | 1185-53-1 | X | - | 214-684-5 | X | X | | X | X | KE-34819 |
| Tris (hydroxymethyl) aminomethane | 77-86-1 | X | - | 201-064-4 | X | X | X | X | X | KE-01403 |

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

| Component | Massachusetts | New Jersey | Pennsylvania | Illinois | Rhode Island |
|-----------|---------------|------------|--------------|----------|--------------|
| Water | - | - | X | - | - |

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 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) |
|--|-----------|---|---|---|
| Water | 7732-18-5 | - | - | - |
| 1,3-Propanediol, 2-amino-2-(hydroxymethyl)-, hydrochloride | 1185-53-1 | - | - | - |
| Tris (hydroxymethyl) aminomethane | 77-86-1 | - | - | - |

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) |
|---|-----------|----------------|------------------------------|---------------------------|--|
| Water | 7732-18-5 | Listed | Not applicable | Not applicable | Not applicable |
| 1,3-Propanediol, 2-amino-2-(hydroxymethyl)-, | 1185-53-1 | Not applicable | Not applicable | Not applicable | Not applicable |

| | | | | | |
|-----------------------------------|---------|--------|----------------|----------------|----------------|
| hydrochloride | | | | | |
| Tris (hydroxymethyl) aminomethane | 77-86-1 | Listed | 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) |
|--|-----------|---|--|----------------------------|------------------------------------|
| Water | 7732-18-5 | Not applicable | Not applicable | Not applicable | Not applicable |
| 1,3-Propanediol, 2-amino-2-(hydroxymethyl)-, hydrochloride | 1185-53-1 | Not applicable | Not applicable | Not applicable | Not applicable |
| Tris (hydroxymethyl) aminomethane | 77-86-1 | Not applicable | Not applicable | Not applicable | Not applicable |

16. Other Information

Prepared By

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Creation Date

19-Apr-2018

Revision Date

28-Dec-2025

Print Date

28-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