

SAFETY DATA SHEET

1. Identification

Product identifier: Tromethamine

Other means of identification

Synonyms: TRIS (Base), Tris(hydroxymethyl) aminomethane
Product No.: 1806, 3914, 4099, 4101, 4102, 4109, 7732, 7736, 7747, BS14, LP12, X171, 32011

Recommended use and restriction on use

Recommended use: For Laboratory, Research or Manufacturing Use.
Restrictions on use: Not determined.

Details of the supplier of the safety data sheet

	Avantor Performance Materials, LLC 100 Matsonford Rd, Suite 200 Radnor, PA 19087
Telephone:	Customer Service: 855-282-6867
Fax:	
Contact Person:	Product Information Compliance
E-mail:	info@avantormaterials.com

Emergency telephone number:

CHEMTREC: 1-800-424-9300 within US and Canada (24 hrs/day, 7 days/week)

2. Hazard identification

Hazard Classification

Not classified

Label Elements

Hazard Symbol:	No symbol
Signal Word:	No signal word.
Hazard Statement:	Not applicable
Precautionary Statements	Not applicable

Other hazards which do not result in GHS classification: None.

3. Composition/information on ingredients

Substances

Composition Comments: The components are not hazardous or are below required disclosure limits.

4. First-aid measures

General information: Get medical advice/attention if you feel unwell. Show this safety data sheet to the doctor in attendance.

Ingestion: Rinse mouth. Call a POISON CENTER/doctor if you feel unwell.

Inhalation: Move to fresh air. Get medical attention if symptoms persist. If breathing stops, provide artificial respiration.

Skin Contact: Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention if symptoms occur. Wash contaminated clothing before reuse. Destroy contaminated clothing and shoes.

Eye contact: Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention if symptoms persist.

Most important symptoms/effects, acute and delayed

Symptoms: Irritating to eyes, respiratory system and skin.

Hazards: None known.

Indication of immediate medical attention and special treatment needed

Treatment: Treat symptomatically. Symptoms may be delayed.

5. Fire-fighting measures

General Fire Hazards: In case of fire and/or explosion do not breathe fumes.

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: Water spray, dry powder or carbon dioxide.

Unsuitable extinguishing media: None known.

Specific hazards arising from the chemical: Dust may form explosive mixture with air. During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters

Special fire fighting procedures: Move containers from fire area if you can do so without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters: Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures:	ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Keep unauthorized personnel away. Use personal protective equipment. Keep upwind. Ventilate closed spaces before entering them. Avoid inhalation of dust. See Section 8 of the SDS for Personal Protective Equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
Methods and material for containment and cleaning up:	Sweep up and place in a clearly labeled container for chemical waste. Avoid dust formation. Clean surface thoroughly to remove residual contamination. Dike far ahead of larger spills for later disposal.
Notification Procedures:	Dike for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Stop the flow of material, if this is without risk. Inform authorities if large amounts are involved.
Environmental Precautions:	Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling:	Use personal protective equipment as required. Do not taste or swallow. Avoid conditions which create dust. Dust clouds may be explosive under certain conditions. DO NOT handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Avoid inhalation of dust. Avoid contact with eyes, skin, and clothing. Use only with adequate ventilation. Wash hands thoroughly after handling. See Section 8 of the SDS for Personal Protective Equipment.
Conditions for safe storage, including any incompatibilities:	Keep containers tightly closed. Keep in a cool, well-ventilated place. Store in a dry place.

8. Exposure controls/personal protection

Control Parameters	
Occupational Exposure Limits	None of the components have assigned exposure limits.
Appropriate Engineering Controls	No data available.
Individual protection measures, such as personal protective equipment	
General information:	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. An eye wash and safety shower must be available in the immediate work area.
Eye/face protection:	Use tight fitting goggles if dust is generated.
Skin Protection	
Hand Protection:	Chemical resistant gloves
Other:	Wear appropriate clothing to prevent repeated or prolonged skin contact.

Respiratory Protection:	In case of inadequate ventilation use suitable respirator.
Hygiene measures:	Provide eyewash station and safety shower. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Do not eat, drink or smoke when using the product. Wash contaminated clothing before reuse.

9. Physical and chemical properties

Appearance

Physical state:	Solid
Form:	Crystalline Powder
Color:	White, Pale yellow
Odor:	Slight characteristic odor
Odor threshold:	No data available.
pH:	10,3 - 10,5 (25 °C) (0.05 molar solution)
Melting point/freezing point:	165 - 173 °C
Initial boiling point and boiling range:	288 °C
Flash Point:	No data available.
Evaporation rate:	No data available.
Flammability (solid, gas):	No data available.
Upper/lower limit on flammability or explosive limits	
Flammability limit - upper (%):	No data available.
Flammability limit - lower (%):	No data available.
Explosive limit - upper (%):	No data available.
Explosive limit - lower (%):	No data available.
Vapor pressure:	No data available.
Vapor density:	No data available.
Density:	No data available.
Relative density:	No data available.
Solubility(ies)	
Solubility in water:	0,55 g/l (20 °C)
Solubility (other):	acetone: 20 g/l cyclohexane: 0,1 g/l ethyl acetate: 0,5 g/l ethylene glycol: 79,1 g/l methanol: 26 g/l
Partition coefficient (n-octanol/water):	-1,56
Auto-ignition temperature:	No data available.
Decomposition temperature:	No data available.
Viscosity:	No data available.
Other information	
Bulk density:	1.500 kg/m ³
Molecular weight:	121,14 g/mol (NH ₂ C(CH ₂ OH) ₃)

10. Stability and reactivity

Reactivity:	No dangerous reaction known under conditions of normal use.
Chemical Stability:	Material is stable under normal conditions.

Possibility of hazardous reactions:	Hazardous polymerization does not occur.
Conditions to avoid:	Heat, sparks, flames. Contact with incompatible materials.
Incompatible Materials:	Strong oxidizing agents. Aluminum. Copper.
Hazardous Decomposition Products:	Nitrogen oxides. Thermal decomposition may produce oxides of carbon and nitrogen.

11. Toxicological information

Information on likely routes of exposure

Inhalation:	Dust may irritate respiratory system.
Skin Contact:	Prolonged skin contact may cause temporary irritation.
Eye contact:	May cause temporary eye irritation.
Ingestion:	Irritating. May cause nausea, stomach pain and vomiting.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral	
Product:	LD 50 (Rat): 5.900 - 6.000 mg/kg
Dermal	
Product:	LD 50 (Rat): > 5.000 mg/kg
Inhalation	
Product:	No data available.

Repeated dose toxicity	
Product:	No data available.

Skin Corrosion/Irritation	
Product:	Prolonged skin contact may cause temporary irritation.

Serious Eye Damage/Eye Irritation	
Product:	May cause temporary eye irritation.

Respiratory or Skin Sensitization	
Product:	Not a skin nor a respiratory sensitizer.

Carcinogenicity	
Product:	This substance has no evidence of carcinogenic properties.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:
No carcinogenic components identified

US. National Toxicology Program (NTP) Report on Carcinogens:
No carcinogenic components identified

ACGIH Carcinogen List:
No carcinogenic components identified

Germ Cell Mutagenicity

In vitro
Product: No mutagenic components identified

In vivo
Product: No mutagenic components identified

Reproductive toxicity

Product: No components toxic to reproduction

Specific Target Organ Toxicity - Single Exposure

Product: Respiratory tract irritation.

Specific Target Organ Toxicity - Repeated Exposure

Product: None known.

Aspiration Hazard

Product: Not classified

Other effects: None known.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish
Product: No data available.

Aquatic Invertebrates
Product: No data available.

Chronic hazards to the aquatic environment:

Fish
Product: No data available.

Aquatic Invertebrates
Product: No data available.

Toxicity to Aquatic Plants
Product: No data available.

Persistence and Degradability

Biodegradation
Product: The product is readily biodegradable.

BOD/COD Ratio
Product: No data available.

Bioaccumulative potential

Bioconcentration Factor (BCF)
Product: No data available on bioaccumulation.

Partition Coefficient n-octanol / water (log Kow)

Product: Log Kow: -1,56

Mobility in soil: The product is water soluble and may spread in water systems.

Other adverse effects: The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

13. Disposal considerations

Disposal instructions: Discharge, treatment, or disposal may be subject to national, state, or local laws.

Contaminated Packaging: Since emptied containers retain product residue, follow label warnings even after container is emptied.

14. Transport information

TDG
Not regulated.

IMDG
Not regulated.

IATA
Not regulated.

Transport in bulk according to Annex II of MARPOL and the IBC Code: Not applicable

15. Regulatory information

Canada Federal Regulations

List of Toxic Substances (CEPA, Schedule 1)
Not Regulated

Export Control List (CEPA 1999, Schedule 3)
Not Regulated

National Pollutant Release Inventory (NPRI)
Canada. National Pollutant Release Inventory (NPRI) Substances, Part 5, VOCs with Additional Reporting Requirements
NPRI PT5 Not Regulated

Canada. National Pollutant Release Inventory (NPRI) (Schedule 1, Parts 1-4)
NPRI Not Regulated

Greenhouse Gases
Not Regulated

Controlled Drugs and Substances Act

CA CDSI	Not Regulated
CA CDSII	Not Regulated
CA CDSIII	Not Regulated
CA CDSIV	Not Regulated
CA CDSV	Not Regulated
CA CDSVII	Not Regulated

CA CDSVIII Not Regulated

Precursor Control Regulations

Not Regulated

International regulations

Montreal protocol

Not applicable

Stockholm convention

Not applicable

Rotterdam convention

Not applicable

Kyoto protocol

Not applicable

Inventory Status:

Australia AICS:	On or in compliance with the inventory
Canada DSL Inventory List:	On or in compliance with the inventory
China Inv. Existing Chemical Substances:	On or in compliance with the inventory
Japan (ENCS) List:	On or in compliance with the inventory
Japan ISHL Listing:	On or in compliance with the inventory
Korea Existing Chemicals Inv. (KECI):	On or in compliance with the inventory
Mexico INSQ:	On or in compliance with the inventory
New Zealand Inventory of Chemicals:	On or in compliance with the inventory
Philippines PICCS:	On or in compliance with the inventory
Taiwan Chemical Substance Inventory:	On or in compliance with the inventory
US TSCA Inventory:	On or in compliance with the inventory
EINECS, ELINCS or NLP:	On or in compliance with the inventory

16. Other information

Revision Date: 02.11.2020

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Source of information: Sources of information used in preparing this SDS included one or more of the following: results from in house or supplier toxicology studies, information from the Toxicology Data Network (TOXNET), European Chemical Agency (ECHA) substance dossiers, IARC Monographs, US National Toxicology Program data, the Agency for Toxic Substances and Disease Registry, other manufacturer's SDSs and other sources, as appropriate.

Further Information: No data available.

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