



MATERIAL SAFETY DATA SHEET

Manufacturer: Strem Chemicals, Inc
7 Mulliken Way
Newburyport, MA 01950-4098 U.S.A.
www.strem.com

Strem Customer Service (978) 499-1600
CHEMTREC (Emergency Only) (800) 424-9300
Poison Center (800) 562-8236

Section 1: Product Identification

Chemical Name: Trimethylborane, elec. gr. (99.999%-B) PURATREM
Product Number: 98-1988
CAS Registry Number: 593-90-8
Formula: (CH₃)₃B
EINECS Number: 209-816-3
Chemical Family: metal alkyl
Synonym: trimethylborane

Section 2: Composition and Information on Ingredients

Ingredient	CAS Number	Percent	ACGIH (TWA)	OSHA (PEL)
Title Compound	593-90-8	100%	no data	no data

Section 3: Hazards Identification

Emergency Overview: Highly flammable. Readily ignited with flame, sparks, friction, or heat. May be irritating to skin, eyes and mucous membranes. Some boron compounds cause depression of circulation, vomiting, diarrhea, shock and coma

Primary Routes of Exposure: Ingestion, inhalation, skin and eyes.

Eye Contact: May cause irritation to eyes.

Skin Contact: May cause irritation to the skin.

Inhalation: Toxic if inhaled. May be irritating to the nose, mucous membranes and respiratory tract.

Ingestion: May be toxic by ingestion. High doses may cause boron poisoning: convulsions, cyanosis, coma and death.

Acute Health Affects: May be irritating to skin, eyes and respiratory tract. Redness and pain in eyes, sore throat and twitching of facial muscles may occur. High doses may cause convulsions, cyanosis, coma and death.

Chronic Health Affects: Repeated ingestion of some boron compounds may cause dryness of mucous membranes, anorexia, vomiting, mild diarrhea, skin rash, and low blood cell count. Kidney damage may occur.

NTP: No

IARC: No

OSHA: No

SECTION 4: First Aid Measures

Eye Exposure: Immediately flush the eyes with copious amounts of water for at least 10-15 minutes. A victim may need assistance in keeping their eye lids open. Get immediate medical attention.

Skin Exposure: Wash the affected area with water. Remove contaminated clothes if necessary. Seek medical assistance if irritation persists.

Inhalation: Remove the victim to fresh air. Closely monitor the victim for signs of respiratory problems, such as difficulty in breathing, coughing, wheezing, or pain. In such cases seek immediate medical assistance.

Ingestion: Seek medical attention immediately. Keep the victim calm. Give the victim water (only if conscious). Induce vomiting only if directed by medical personnel.



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SECTION 5: Fire Fighting Measures

Flash Point: pyrophoric
Autoignition Temperature: -4°F
Explosion Limits: > 1 Torr- explodes
Extinguishing Medium: dry chemical, carbon dioxide, water, or foam. (Reignites)
Special Fire Fighting Procedures: It may be best to allow fire to burn itself out. Fire fighters should be equipped with a NIOSH approved positive pressure self-contained breathing apparatus and full protective clothing.
Hazardous Combustion and Decomposition Products: If involved in a fire this material may form toxic boron oxide dust.
Unusual Fire or Explosion Hazards: Extremely flammable. May ignite spontaneously on contact with air.

SECTION 6: Accidental Release Measures

Spill and Leak Procedures: Wear recommended personal protective equipment. Be prepared to fight fire. Eliminate ignition sources. Spills will ignite.

SECTION 7: Handling and Storage

Handling and Storage: Handle and store the material under an inert atmosphere of nitrogen or argon. The material must be stored in a steel container. Do not store residues. All lines and tanks must be flushed to below 3% oxygen before introducing trimethylboron.

SECTION 8: Exposure Controls and Personal Protection

Eye Protection: Always wear approved safety glasses when handling a chemical substance in the laboratory.
Skin Protection: Wear protective clothing and gloves. Consult with glove manufacturer to determine the proper type of glove.
Ventilation: If possible, handle the material in an efficient fume hood.
Respirator: If ventilation is not available a respirator should be worn. The use of respirators requires a Respirator Protection Program to be in compliance with 29 CFR 1910.134.
Ventilation: If possible, handle the material in an efficient fume hood.
Additional Protection: No additional protection required.

SECTION 9: Physical and Chemical Properties

Color and Form: colorless gas
Molecular Weight: 55.92
Melting Point: -161.5°
Boiling Point: -20.2°
Vapor Pressure: no data
Specific Gravity: 0.625 (-100°)
Odor: none
Solubility in Water: insoluble

SECTION 10: Stability and Reactivity

Stability: pyrophoric
Hazardous Polymerization: no hazardous polymerization
Conditions to Avoid: Heat, ignition sources, and contact with air.
Incompatibility: Air, oxidizing agents and halogens
Decomposition Products: Boron oxide, carbon monoxide, carbon dioxide, and organic fumes.

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SECTION 11: Toxicological Information

RTECS Data: No information available in the RTECS files.
Carcinogenic Effects: No data available
Mutagenic Effects: No data available
Tetratogenic Effects: No data available

SECTION 12: Ecological Information

Ecological Information: No information available

SECTION 13: Disposal Considerations

Disposal: Dispose of according to federal, state, and local regulations.

SECTION 14: Transportation

Shipping Name (CFR): Compressed gas, Toxic, Flammable, N.O.S.
Hazard Class (CFR): 2.3
Additional Hazard Class (CFR): 2.1
Packaging Group (CFR): I
UN ID Number (CFR): UN# 1953
Shipping Name (IATA): Prohibited
Hazard Class (IATA): NA
Additional Hazard Class (IATA): NA
Packaging Group (IATA): NA
UN ID Number (IATA): UN# 3203

SECTION 15: Regulatory Information

TSCA: Not listed in the TSCA inventory
SARA (Title 313): Title compound not listed.
Second Ingredient: none
Third Ingredient: none

SECTION 16: Other Information

Disclaimer: The information herein is believed to be accurate and reliable as of the date compiled. However, Strem Chemicals, Inc. makes no representation, warranty, or guarantee of any kind with respect to the information contained in this document or any use of the product based on this information.
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Strem Chemicals, Inc.
7 Mulliken Way
Newburyport, MA 01950-4098 USA
Tel: (978) 499 1600
Fax: (978) 465 3104
Toll free (in USA & Canada)
Tel: (800) 647 8736
Fax: (800) 517 8736
info@strem.com

Strem Chemicals, Inc.
15, rue de l'Atome, Z.I.
67800 BISCHHEIM (France)
Tel: (33) 03 88 62 52 60
Fax: (33) 03 88 62 26 81
info.europe@strem.com

Strem Chemicals, Inc.
Postfach 1215
77672 KEHL (Germany)
Telefon: 0 78 51/ 7 58 79
info.europe@strem.com

Strem Chemicals UK, Ltd.
41 Hills Road
Cambridge, England CB2 1NT
Tel: 0845 643 7263
Fax: 0845 643 7362
enquiries@strem.co.uk