ALKALI METALS

AN ISO 9001 : 2000 & 14001 COMPANY

ISO 9001:2015 BUREAU VERITAS Certification

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MATERIAL SAFETY DATA SHEET

TRIMETHYL BORATE

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MSDS Name: TRIMETHYL BORATE
Synonyms : Methyl borate

Company Identification:
Alkali Metals Ltd.,
Plot B-5, Block III, IDA Uppal
Hyderabad, India - 500 039
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SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS

CAS#	Chemical Name	EINECS#
121-43-7	Trimethyl borate	204-468-9

Hazard Symbol : XNF
Risk phrases : 11 21

SECTION 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Highly flammable, Harmful in contact with skin.

Potential Health Effects:-
Eye : Causes mild eye irritation
Skin : May causes skin irritation. May be harmful if absorbed through the skin.
Ingestion : May cause irritation of digestive tract, May be harmful if swallowed.
Inhalation : May causes respiratory tract irritation. May be harmful if inhaled
Chronic : Not available

SECTION 4 - FIRST AID MEASURES

Eyes : Immediately flush eyes with plenty of water occasionally lifting the upper and lower lids. Get medical aid.
Skin : Flush skin with plenty of water while removing contaminated clothing and shoes.
Ingestion : Get medical aid. Wash mouth out with water.
Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

SECTION 5 - FIRE FIGHTING MEASURES

General Information : As in any fire, wear a self-contained breathing apparatus and full protective gear. Vapors may form an explosive mixture with air. Vapors can travel to a source of ignition and flask back. Will burn if involved in a fire. Containers may explode in the heat of fire. Flammable liquid and vapor.

Extinguishing Media: Use water spray to cool fire-exposed containers. Use foam dry chemical, carbon dioxide.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

General Information: Use proper personal protective equipment.
Spills/Leaks **:** Absorb spill with inert material (eg sand or earth) then place into a suitable disposal container. Remove all sources of ignition. Use spark-proof tool.

SECTION 7 - HANDLING and STORAGE

Handling:- Use spark proof tools and explosion proof equipment. Avoid breathing dust, vapor, mist or gas. Avoid contact with skin and eyes.
Storage:- Keep away from sources of ignition. Store in a cool, dry place. Store in a tightly closed container. Keep under nitrogen blanket.

SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

Engineering Controls:- Use adequate general or local explosion-proof ventilation to keep airborne levels to acceptable levels.
Exposure limits : CAS # 127-43-7

Personal Protective Equipment
Eyes **:** Wear chemical splash goggles.
Skin **:-** Wear appropriate protective gloves to prevent skin exposure.
Clothing **:-** Wear appropriate protective clothing to prevent skin exposure.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical State	**:** Clear liquid
Appearance	**:** Colourless
Odor	**:** Not available.
pH	**:** Not available.
Vapor Pressure	**:** Not available.
Viscosity	**:** Not available.
Boiling Point	**:** 68-69°C
Freezing/Melting Point	**:** - 34 deg C (-29.20°F)
Autoignition Temperature	**:** Not available.
Flash point	**:** - 8 deg C (-17.60°F)
Explosion limits : Lower	**:** Not available
Explosion limits : Upper	**:** Not available
Solubility in water	**:** Reacts
Specific Gravity/Density	**:** 0.915 gms /cc
Molecular Formula	**:** $C_3H_9O_3B$
Molecular Weight	**:** 103.91

SECTION 10 - STABILITY AND REACTIVITY

Chemical Stability:- Stable under normal temperatures and pressures. Moisture sensitive.
Conditions to Avoid:- Incompatible materials, ignition sources, exposure to moist air or water.
Incompatibilities with Other Materials:- Oxidizing agents, Acids, fluorine, air.
Hazardous Decomposition Products:- Carbon monoxide, carbon dioxide, oxides of boron.
Hazardous Polymerization:- Will not occur.

SECTION 11 - TOXICOLOGICAL INFORMATION

RTECS#:- CAS# 121-43-7 : ED5600000
LD50/LC50:-

CAS # 121-43-7 : Draize test, rabbit, eye : 500 mg
Moderate
Oral, mouse : LD 50= 1290 mg / kg,
Oral, rat : LD 50= 6140 mg / kg,
Skin, rabbit : LD 50= 1980 uL / kg; Not available

Carcinogenicity:- Trimethyl borate - Not listed as a carcinogen by ACGIH, IARC or NTP.

SECTION 12 - ECOLOGICAL INFORMATION

Not available

SECTION 13 - DISPOSAL CONSIDERATIONS

Dispose of in a manner consistent with federal, state, and local regulations.

SECTION 14 - TRANSPORT INFORMATION

	IATA	IMO	RID / ADR
Shipping Name	Trimethyl borate	Trimethyl borate	Trimethyl borate
Hazard class	3	3	3
UN number	2416	2416	2416
Packing group	II	II	II

SECTION 15 - REGULATORY INFORMATION

European / International Regulations
European Labeling in accordance with EC directives
Hazard Symbols : XNF

Risk Phrases :
R 11 Highly flammable .
R 21 Harmful in contact with skin.

Safety Phrases :
S 2 Keep out of reach of children.
S 16 Keep away from sources of ignition – No smoking.
S 23 Do not inhale gas / fumes / vapour / spray.
S 25 Avoid contact with eyes.

WGK (Water Danger/Protection)
CAS# 121-43-7 : Not available.
Canada
CAS # 121-43-7 is listed on the DSL list.

US Federal
TSCA

CAS # 121-43-7 is listed on the TSCA inventory.

SECTION 16 - ADDITIONAL INFORMATION

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall Alkali Metals be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Alkali Metals has been advised of the possibility of such damages.