

**BORON FLUORIDE MONOETHYLAMINE**Version 1.1
SDS US GHSSDS Number: 2200694-0012-5-
000Revision Date: 07.07.2015

SECTION 1. IDENTIFICATION

Product name : BORON FLUORIDE MONOETHYLAMINE

Product code : 2200694-0012-5-000

Manufacturer or supplier's details

Company name of supplier : Atotech Deutschland GmbH

Address : Erasmusstrasse 20
Berlin 10553
Germany

Telephone : +4930349850

Company name of supplier : Atotech USA

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Prepared by
Product Safety Department (PSD): product-safety@atotech.comInquiries
Questions about content of Safety Data Sheets: product-safety@atotech.com

Emergency telephone : CHEMTREC +18004249300

Transport Medical : Rocky Mountain Poison Control Center: 303-623-5716

Recommended use of the chemical and restrictions on useRecommended use : Plating agents and metal surface treating agents
Surface treatment

Restrictions on use : For industrial use only.

SECTION 2. HAZARDS IDENTIFICATION**GHS Classification**

Skin irritation : Category 2

Serious eye damage : Category 1

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GHS Label element

Hazard pictograms

:



Signal Word

: Danger

Hazard Statements

: H315 Causes skin irritation.
H318 Causes serious eye damage.

Precautionary Statements

: **Prevention:**
P264 Wash skin thoroughly after handling.
P280 Wear protective gloves/ eye protection/ face protection.
Response:
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water
for several minutes. Remove contact lenses, if present and easy
to do. Continue rinsing.
P310 Immediately call a POISON CENTER or doctor/ physician.
P362 Take off contaminated clothing and wash before reuse.**Other hazards**

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTSSubstance / Mixture : Substance
Substance name : Boron Trifluoride Ethylamine
CAS-No. : 200-852-5
Chemical nature : Substance**Hazardous ingredients**

Chemical Name	CAS-No.	Concentration (% w/w)
Ethylamine-boron trifluoride	75-23-0	>= 80 - <= 100

This product may contain component (s) that are not listed under disclosure. All components not listed, do not contain hazardous materials above deminimus disclosure limits as defined by OSHA, NIOSH, ACGIH or Canadian WHMIS regulations and or guidelines. Please refer to other sections of the MSDS for information on safety, health and environmental guidelines and precautions.

SECTION 4. FIRST AID MEASURESGeneral advice : Call a physician or poison control center immediately.
Show this material safety data sheet to the doctor in attendance.

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If inhaled	: Move to fresh air.
In case of skin contact	: Wash off immediately with plenty of water for at least 15 minutes. Take off contaminated clothing and shoes immediately. Wash contaminated clothing before re-use. Get medical attention if irritation develops and persists.
In case of eye contact	: In case of contact, immediately flush eyes with plenty of water for at least 30 minutes. Consult a physician.
If swallowed	: If swallowed, call a poison control center or doctor immediately. Never give anything by mouth to an unconscious person. Do not induce vomiting without medical advice.
Most important symptoms and effects, both acute and delayed	: Causes skin irritation. Causes serious eye damage.
Protection of first-aiders	: First Aid responders should pay attention to self-protection and use the recommended protective clothing
Notes to physician	: For specialist advice physicians should contact the Poison Control Center.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	: No information available.
Hazardous combustion products	: Fluorine compounds Nitrogen oxides (NOx) Carbon oxides
Specific extinguishing methods	: Use a water spray to cool fully closed containers. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Special protective equipment for fire-fighters	: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and	: Use personal protective equipment. Evacuate personnel to safe areas.
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- emergency procedures : Keep people away from and upwind of spill/leak.
- Environmental precautions : Should not be released into the environment.
- Methods and materials for containment and cleaning up : Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air).
Shovel or sweep up.
Keep in suitable, closed containers for disposal.
Clean contaminated floors and objects thoroughly while observing environmental regulations.

SECTION 7. HANDLING AND STORAGE

- Advice on safe handling : For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Handle in accordance with good industrial hygiene and safety practice.
In case of insufficient ventilation, wear suitable respiratory equipment.
Avoid breathing dust.
- Conditions for safe storage : Keep containers tightly closed in a dry, cool and well-ventilated place.
- Recommended storage temperature : -5 - 40 °C

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Ingredients with workplace control parameters**

Contains no substances with occupational exposure limit values.

Personal protective equipment

- Respiratory protection : In case of mist, spray or aerosol exposure wear suitable personal respiratory protection and protective suit.

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
In case of insufficient ventilation, wear suitable respiratory equipment.
- Hand protection
- Remarks : Wear protective gloves. The suitability for a specific workplace should be discussed with the producers of the protective gloves. Follow the instructions for use issued by the producer.
- Eye protection : Tightly fitting safety goggles
Face-shield
Ensure that eyewash stations and safety showers are close

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- to the workstation location.
- Skin and body protection : Impervious clothing
Boots
- Protective measures : Ensure adequate ventilation, especially in confined areas.
- Hygiene measures : Avoid contact with skin, eyes and clothing.
Wash hands before breaks and immediately after handling the product.
When using do not eat, drink or smoke.
Avoid breathing dust.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance : solid
- Color : white, light yellow
- Odor : No information available.
- Odor Threshold : No data available
- pH : not determined
- Melting point/freezing point : 85 - 89 °C
- Initial boiling point and boiling range : 220 °C
- Flash point : 157 °C
Method: closed cup
- Evaporation rate : Not applicable
- Flammability (solid, gas) : Not classified as a flammability hazard
- Upper explosion limit : No data available
- Lower explosion limit : No data available
- Vapor pressure : not determined
- Relative vapor density : Not applicable
- Density : not determined
- Solubility(ies)
Water solubility : soluble
- Partition coefficient: n-octanol/water : No data available
- Autoignition temperature : No data available

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Decomposition temperature : No data available

Viscosity
Viscosity, dynamic : No data available

Viscosity, kinematic : No data available

Oxidizing properties : Not applicable

SECTION 10. STABILITY AND REACTIVITY

Reactivity : None under normal processing.

Chemical stability : Stable under recommended storage conditions.

Possibility of hazardous reactions : No dangerous reaction known under conditions of normal use.

Conditions to avoid : Avoid dust formation.
To avoid thermal decomposition, do not overheat.
Exposure to moisture

Incompatible materials : Metals
Strong bases
Strong oxidizing agents

Hazardous decomposition products : No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION**Information on likely routes of exposure**Eye contact
Skin Absorption**Acute toxicity**

Not classified based on available information.

Remark: The acute toxicity estimate (ATE) of the ingredients are derived using the LD50/LC50 values where available.

Skin corrosion/irritation

Causes skin irritation.

Product:

Remarks: May cause skin irritation and/or dermatitis.

Serious eye damage/eye irritation

Causes serious eye damage.

Product:

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Remarks: May cause irreversible eye damage.

Respiratory or skin sensitization

Skin sensitization: Not classified based on available information.

Respiratory sensitization: Not classified based on available information.

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

IARC

No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

OSHA specified

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Not classified based on available information.

STOT-single exposure

Not classified based on available information.

STOT-repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

Further information**Product:**

Remarks: No data available

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity**

No data available

Persistence and degradability

No data available

Bioaccumulative potential

No data available

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Mobility in soil

No data available

Other adverse effects**Product:**

No data available

SECTION 13. DISPOSAL CONSIDERATIONS**Disposal methods**

Waste from residues : Dispose of in accordance with local regulations.
Dispose of wastes in an approved waste disposal facility.

Contaminated packaging : Empty containers should be taken to an approved waste
handling site for recycling or disposal.

SECTION 14. TRANSPORT INFORMATION**International Regulation****UNRTDG**

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

Domestic regulation**DOT / 49 CFR**

Not regulated as a dangerous good

SECTION 15. REGULATORY INFORMATION

TSCA 5a : No substances are subject to a Significant New Use Rule.

TSCA_12b : No substances are subject to TSCA 12(b) export notification
requirements.

DEA : Not applicable

EPCRA - Emergency Planning and Community Right-to-Know**CERCLA Reportable Quantity**

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

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This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Acute Health Hazard

SARA 302 : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

US State Regulations**Massachusetts Right To Know**

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know

No components are subject to Pennsylvania Right to Know Act.

Pennsylvania Right To Know

No components are subject to Pennsylvania Right to Know Act.

New Jersey Right To Know

No components are subject to New Jersey Right to Know Act.

New Jersey Right To Know

No components are subject to New Jersey Right to Know Act.

California Prop. 65

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

Remarks: Components which are only displayed in Section 15 are being reported for local regulatory purposes. These components are not displayed in Section 3 due to one or more of the following conditions being met: being present in the product at concentration(s) below threshold limit values for reporting, not considered hazardous materials, health hazards or because they do not contribute to the overall GHS Classification of the final product as required by OSHA HazCom 2012 final rule (29 CFR 1910.1200).

Substances currently restricted by WEEE/RoHS (European Directive 2012/19/EC , 2011/65/EC) or ELV (European Directive 2000/53/EC):

PBDE	PBB	CrVI	Hg	Pb	Cd
-	-	-	-	-	-

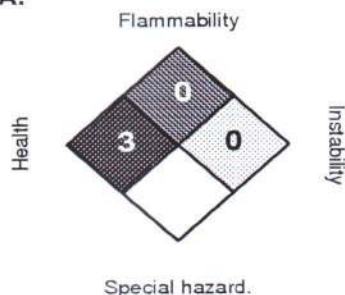
Please note: Current legislation restricting the use of certain substances applies to „homogeneous material“ in finished articles being supplied to the market. Substances deposited during surface finishing may have a composition (weight percent) higher than the weight percent of the substance in the operating solution from which the deposit is made. Atotech encourages its customers to implement systems to ensure their finished products comply with the regulations in force.

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SECTION 16. OTHER INFORMATION**Full text of other abbreviations**

(Q)SAR - (Quantitative) Structure Activity Relationship; ASTM - American Society for the Testing of Materials; bw - Body weight; DIN - Standard of the German Institute for Standardisation; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISO - International Organisation for Standardization; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; DOT - Department of Transportation; EHS - Extremely Hazardous Substance; HMIS - Hazardous Materials Identification System; MSHA - Mine Safety and Health Administration; NFPA - National Fire Protection Association; RCRA - Resource Conservation and Recovery Act; RQ - Reportable Quantity; SARA - Superfund Amendments and Reauthorization Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; GLP - Good Laboratory Practice; ERG - Emergency Response Guide; NTP - National Toxicology Program; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods

Further information**NFPA:****HMIS III:**

HEALTH	3
FLAMMABILITY	0
PHYSICAL HAZARD	0

0 = not significant, 1 = Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

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