



BORON MATERIAL SAFETY DATA SHEET

HEALTH HAZARD INFORMATION

TOXICITY DATA orl-mus LDSO: **2000mg/kg**
 orl-man LDSO: **300mg/kg**

HMIS HAZARD RATING
 HEALTH: **3** FLAMMABILITY: **4** REACTIVITY: **3** PERSONAL PROTECTION: **X**

ROUTES OF ENTRY INHALATION: **Yes**
 INGESTION: **Yes**
 SKIN: **Yes**

MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE: **Respiratory disorders**
 EFFECTS OF OVEREXPOSURE (acute and chronic):
 INHALATION: **May cause irritation of the nose, throat & eyes, sneezing, headache, excitability, dizziness and staggering, nausea and vomiting, and difficulty breathing for acute exposure. Heavy exposure can cause death.**
 DERMAL/EYE CONTACT: **May cause irritation and inflammation of the skin and eyes, may cause watering of the eyes, swelling of eyelids and risk of serious injury to eye.**
 OTHER (specify): **Considered an industrial poison. Boron is one of a group of elements, such as Pb, Mn & As which affects the CNS. Boron poisoning causes depression of the circulation, persistent vomiting & diarrhea, followed by profound shock and coma. The temp. becomes subnormal and scarlet fever like rash may cover the entire body.**

CARCINOGENICITY: **None** NTP: **No** IARC MONOGRAPHS: **No** OSHA REGULATE: **No**

EMERGENCY FIRST AID PROCEDURES:
 INGESTION: **Induce vomiting. Seek medical attention.**
 INHALATION: **Remove victim to fresh air, administer oxygen, seek medical attention.**
 SKIN CONTACT: **Brush material off skin. Wash affected area with soap & water.**
 EYE CONTACT: **Flush eyes with water for 15 minutes and, seek medical attention.**

REACTIVITY DATA

STABILITY **Unstable**
 CONDITIONS CONTRIBUTING TO UNSTABILITY **Air, heat**
 INCOMPATIBILITY (MATERIALS TO AVOID) **NH3, Br2, BrF3, Cs2C2, CuO, F2, PbO2, HNO3, NO, NOF, N2O, KC1O3, KNO3, Rb2C2, AgF, S, Cl, BrF5, LF5, metal fluorides interhalogens, nitric fluoride (FNO2), OF2, KNO2, Nox, N92O2, PBO, air & steam**

HAZARDOUS DECOMPOSITION PRODUCTS **B2O3**
 HAZARDOUD POLYMERZATION **Will Not Occur**
 CONDITIONS TO AVOID **Air, steam, heat and all incompatible materials.**



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SAFE HANDLING AND USE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

Wear self-contained breathing apparatus and full protective clothing, isolate the area and insure proper ventilation is available and that water and moisture are kept out of the area. Vacuum up spill and place container for proper disposal. Take care not to raise dust.

WASTE DISPOSAL METHOD: **In accordance with local, state and federal regulations.**

SPECIAL PROTECTIVE INFORMATION

| | |
|----------------------------------|---|
| RESPIRATORY PROTECTION (specify) | NIOSH/MSHA approved dust-mist-fume cartridge respirator. |
| LOCAL EXHAUST | Maintain below TLV |
| MECHANICAL (general) | Recommended |
| SPECIAL | Handle in dry, controlled, inert atmosphere |
| OTHER PROTECTIVE CLOTHING | To prevent contact with skin & work clothes |
| PROTECTIVE GLOVES | Neoprene |
| EYE PROTECTION | Safety glasses |

SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING/STORAGE:

Store in tightly closed containers in a cool, dry place. Wash hands and face thoroughly. Store away from incompatible materials.

TRANSPORTATION REQUIREMENTS

| | |
|-------------|-----------------------|
| DOT CLASS: | Not classified |
| UN NUMBER: | N. C. |
| IMCO CLASS: | N. C. |
| OTHER: | N. C. |

PRECAUTIONARY LABELING **NONE**

THE ABOVE INFORMATION IS ACCURATE TO THE BEST OF OUR KNOWLEDGE. HOWEVER, SINCE DATA, SAFETY STANDARDS AND GOVERNMENT REGULATIONS ARE SUBJECT TO CHANGE THE CONDITIONS OF HANDLING AND USE, OR MISUSE ARE BEYOND OUR CONTROL, **ANGSTROM SCIENCES** MAKE NO WARRANTY, EITHER EXPRESSED OR IMPLIED, WITH RESPECT TO THE COMPLETENESS OR CONTINUING ACCURACY OF THE INFORMATION CONTAINED HEREIN AND DISCLAIMS ALL LIABILITY FOR THE RELIANCE THEREON. USER SHOULD SATISFY HIMSELF THAT HE HAS ALL CURRENT DATA RELEVANT TO HIS PARTICULAR USE.

NA= NOT APPLICABLE

ND= NO DATA FOUND



****ADDITIONAL INFORMATION FOR BORON MATERIAL SAFETY DATA SHEET***

OTHER COMMENTS:

Feeble conductor of electricity at room temperature, good conductor at high temperatures. Reacts with fluorine at room temperature. Unaffected by aqueous hydrochloric and hydrofluoric acids. Reacts vigorously with fused sodium peroxide, or with a fusion mixture of sodium carbonate and potassium nitrate.

OTHER:

Boric acid intoxication can come about from absorbing toxic quantities from ointments applied to burned areas or to wounds involving loss or damage to such areas of skin, but it is not absorbed from intact skin.