MATERIAL SAFETY DATA SHEET

EM SCIENCE
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UNIV OF WISCONSIN-WHITEWATER
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WHITEWATER, WI 53190

Preparation Date ..........: AUG 20, '90
Date Sent to Customer ....: MAR 12, '91
Information Phone Number : (609) 354-9200
Chemtrec Emergency Number: 1-800-424-9300

NFPA HAZARD RATINGS
Health ..........: 2  Flammability ..........: 1
Reactivity ..........: 2  Special Hazards: W

Catalog Number(s): SX0380  6371

Chemical Name .......: Sodium Borohydride
Trade Name .........: Sodium Tetrahydroborate (1-)
C.A.S. Number ....: 16940-65-2
Chemical Family ...: Inorganic Salt
Formula ...........: NaBH4

Molecular Weight : 37.83
DOT Shipping Name: Water Reactive Solid, n.o.s. (Sodium Borohydride)
DOT Number .......: UN2813

SECTION I - GENERAL INFORMATION

None other than specified product.

SECTION II - HAZARDOUS INGREDIENTS

SECTION III - PHYSICAL DATA

Boiling Point (C°, 760 mm Hg) : N/A
Melting Point (C°) ........: 400 dec
Specific Gravity (H2O = 1) : 1.074
Vapor Pressure (mm Hg) .......: N/A 20C
Percent Volatile by Vol (%): N/A
Vapor Density (Air = 1) .......: N/A
Evaporation Rate (BUAc = 1) : N/A
Solubility in Water (%) : 55
Appearance and Odor ........: White crystalline powder

SECTION IV - FIRE & EXPLOSION HAZARD DATA

Flash Point (°F) ........ : None
Flammable Limits LEL % : N/A
Flammable Limits UEL % : N/A
Extinguishing Media .......: Use dry chemical; do not use CO2, halocarbons, wet chemical or water.
Fire Fighting Proc...........: Wear self-contained breathing apparatus and protective equipment.
Fire & Expl. Hazards .......:
Reacts with water, acids or transition metal salts to produce highly flammable hydrogen gas.

SECTION V - HEALTH HAZARD DATA (ACUTE AND CHRONIC)

ACGIH TLV/OSHA PEL (TWA) .......: None established
Toxicity Data ............: orl-rat LDLo: 160 mg/kg
Symptoms of Exposure ......: Causes burns on contact.
Harmful if inhaled or swallowed.

Medical Cond. Aggravated by Exp: Data not available.
Routes of Entry ...........: Inhalation, ingestion
Carcinogenicity ..........: The material is not listed (IARC, NTP, OSHA) as cancer causing agent.
Emergency First Aid .......:
GET MEDICAL ASSISTANCE FOR ALL CASES OF OVEREXPOSURE
Eyes: Immediately flush thoroughly with large amounts of water.
Skin: Immediately flush thoroughly with water for at least 15 minutes.
Inhalation: remove to fresh air; give artificial respiration if breathing has stopped.
Ingestion: do not induce vomiting; get immediate medical attention.
Remove contaminated clothing and wash before reuse.

SECTION VI - REACTIVITY DATA

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Stability: YES
Conditions to Avoid:
- Extreme heat
- Decomposes to form H2 at 500C.

Materials to Avoid:
- (X) Water
- (X) Acids
- () Bases
- () Corrosives
- () Oxidizers
- () Other: Transition metal salts and their solutions

Hazardous Polymerization: Does not occur
Hazardous Decomposition: H2

SECTION VII - ENVIRONMENTAL PROTECTION PROCEDURES
Spill Response: Take up and containerize for proper disposal.
Waste Disposal: To be performed in compliance with all current local, state and federal regulations.

SECTION VIII - SPECIAL PROTECTION INFORMATION
Ventilation, Respiratory Protection, Protective Clothing, Eye Protection:
Respiratory Protection: If workplace exposure limit(s) of product or any component is exceeded (see TLV/PEL), a NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure type) under specified conditions (see your safety equipment supplier). Engineering and/or administrative controls should be implemented to reduce exposure.

Material must be handled or transferred in an approved fume hood or with equivalent ventilation.
Protective gloves must be worn to prevent skin contact (Neoprene or equivalent).
Safety glasses with side shields must be worn at all times. Impervious protective clothing should be worn to prevent skin contact.

SECTION IX - SPECIAL PRECAUTIONS
Handling & Storage:
- Keep container tightly closed.
- Store in a cool, dry area away from acids and oxidizers.
- Do not breathe dust.
- Do not get in eyes, on skin or on clothing.

Work/Hygienic Practices: Wash thoroughly after handling. Do not take internally. Eye wash and safety equipment should be readily available.

SECTION X - OTHER INFORMATION
Comments: None
Revision History: 6/1/82, 12/5/86, 10/27/87, 9/28/88
N/A = Not available