

## MATERIAL SAFETY DATA SHEET

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## 1. PRODUCT IDENTIFICATION

CATALOG NO.: R-0006  
 PRODUCT NAME: Base Demand Reagent (BDR)  
 CHEMICAL FAMILY: Inorganic alkali solution

## 2. INGREDIENTS

INGREDIENT	CAS NO.	%	NATURE OF HAZARD
Sodium carbonate	497-19-8	<1	Irritant alkali
Deionized water	7732-18-5	to 100	None

## 3. PHYSICAL/CHEMICAL CHARACTERISTICS

STATE: Liquid      APPEARANCE: Clear, colorless      ODOR: None  
 BOILING PT (F): 212      pH: 11.2      SPECIFIC GRAVITY: 1  
 VAPOR PRESSURE (mm Hg): 17      VAPOR DENSITY (AIR=1): .6  
 PERCENT VOLATILE BY VOLUME: 99      SOLUBILITY IN WATER: Soluble

## 4. FIRE, EXPLOSION HAZARD AND REACTIVITY DATA

FLASH PT: NA      METHOD: NA  
 FLAMMABLE LIMITS: LEL: NA      UEL: NA  
 EXTINGUISHING MEDIA: NA  
 SPECIAL PROCEDURES: Wear self-contained (positive pressure if available) breathing apparatus and full-protective clothing  
 FIRE/EXPLOSION HAZARDS AND HAZARDOUS DECOMPOSITION PRODUCTS: May react violently with strong acids, fluorine, aluminum and lithium metals, and phosphorus pentoxide. May emit toxic fumes of sodium oxide and carbon dioxide.  
 NFPA CODE: Health: 1      Flammability: 0      Reactivity: 0      Specific: NA  
 CONDITIONS TO AVOID: Extreme heat, temperatures. Contact with strong acids, fluorine, metals, phosphorus pentoxide.

## 5. HEALTH HAZARD DATA

INGREDIENT: Sodium carbonate  
 TOXICITY: LD50(oral-rat): 4090 mg/kg  
 PEL: NE      TLV: NE  
 STEL: NE

ROUTE(S) OF ENTRY: Inhalation      Ingestion X      Skin X

TARGET ORGAN(S): Eyes, skin

CARCINOGENICITY: NTP No      IARC No      OSHA No

HEALTH HAZARDS AND SYMPTOMS OF EXPOSURE:

EYES: Irritant.

SKIN: Irritant. Contact may cause irritation.

INGESTION: Irritant. May cause gastrointestinal irritation.

INHALATION: NA

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Eye and skin conditions

**6. PRECAUTIONARY MEASURES**

**PROTECTIVE EQUIPMENT:** General purpose gloves, safety glasses, lab coat  
**HANDLING:** Avoid contact with eyes, skin, and clothing. Avoid breathing chemical. Wash thoroughly after handling.  
**STORAGE:** Cool, dry area. Avoid direct sunlight.

**7. EMERGENCY AND FIRST AID PROCEDURES**

**EYE AND SKIN CONTACT:** Immediately flush eyes with water for 20 minutes or until chemical is removed. Call physician. Wash skin thoroughly with soap and water.

**INGESTION:** Give large amounts of water. Call physician. **DO NOT INDUCE VOMITING.** **DO NOT** give anything by mouth to a person who is unconscious, rapidly losing consciousness, or convulsing.

**INHALATION:** NA

**8. SPILL AND DISPOSAL PROCEDURES**

**SPILL OR RELEASE:** Neutralize with dilute acid. Absorb with vermiculite or other inert material. Containerize for later disposal.

**DISPOSAL:** Incineration or other method to comply with all local, state, and federal regulations.

NA = Not applicable  
ND = Not determined  
NE = Not established

This Material Safety Data Sheet has been prepared in accordance with 29 CFR Part 1910.1200 and contains information believed to be accurate and complete at the date of preparation. However, no warranty is expressed or implied. Advice given under "Spill and Disposal Procedures" assumes compliance with federal, state, and local regulations regarding the disposal of hazardous waste.

DATE PREPARED: July 2005