HYDRITE CHEMICAL CO.
2655 N. MAYFAIR ROAD
MILWAUKEE, WI  53226

MATERIAL SAFETY DATA SHEET

NA-0203  SODIUM BISULFATE  PAGE 1

SIMILAR TO O.S.H.A. FORM 20

DISTRIBUTED BY:  HYDRITE CHEMICAL CO.
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MSDS#: HY851NA0203XX
PREPARED BY: LMT/JRS

MANUFACTURED BY: Jones Hamilton

SECTION I - PRODUCT INFORMATION

TRADE NAME: Sodium Bisulfate
CHEMICAL NAME & SYNONYMS: Sodium Hydrogen Sulfate
                                Niter Cake; Sodium Acid Sulfate
CHEMICAL FAMILY: Monosodium Salt
FORMULA: NaHSO4

DOT PROPER SHIPPING NAME: SODIUM BISULFATE, SOLID

D.O.T. HAZARD CLASS: ORM B

D.O.T. IDENTIFICATION #: UN1821  D.O.T. LABEL:

SECTION II - HAZARDOUS INGREDIENTS

<table>
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<tr>
<th>INGREDIENT</th>
<th>PERCENT</th>
<th>TLV (UNITS)</th>
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<td>Not Applicable</td>
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SECTION III - PHYSICAL DATA

BOILING POINT (DEG. F): Decomposes  SPECIFIC GRAVITY: 2.72
FREEZING POINT (DEG.F): 338  PERCENT VOLATILE
VAPOR PRESSURE (MM HG): N.A.  BY VOLUME%: N.A
VAPOR DENSITY (AIR=1): N.A.  EVAPORATION RATE (N.A.): N.A.
SODIUM BISULFATE

SECTION III - PHYSICAL DATA

SOLUBILITY IN WATER: Appreciable

APPEARANCE AND ODOR: Off white, granular material. No odor.

SECTION IV - FIRE & EXPLOSION HAZARD DATA

FLASH POINT (METHOD USED): None.

FLAMMABLE LIMITS

LEL: N.A.  UEL: N.A.

EXTINGUISHING MEDIA: For fires in area use appropriate media. For example: Water spray. Dry Chemical. Carbon Dioxide. Alcohol Foam.

SPECIAL FIRE FIGHTING PROCEDURES: Evacuate area of unprotected personnel. Wear protective clothing including a NIOSH-Approved self-contained breathing apparatus. Neutralize run-off with Lime, Soda Ash, etc., to prevent corrosion of metals and formation of Hydrogen Gas. Material dissolved in water forms dilute Sulfuric Acid.

UNUSUAL FIRE & EXPLOSION HAZARDS: Sulfur oxide gases emitted at high temperatures.

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE: Not Established (OSHA 29 CFR 1910.2)

Not Established (ACGIH 1984-85)

Recommend maximum exposure limit of 2.5 mg./cu.m. as Sodium Bisulfate (or 1 mg./cu.m. as Sulfuric Acid).

EFFECTS OF OVEREXPOSURE

EYE CONTACT: Causes severe burns and destruction of tissues.
Small quantities can result in permanent damage and loss of vision.
SECTION V - HEALTH HAZARD DATA

SKIN CONTACT: May cause severe irritation and possibly a mild burn.
INHALATION: Inhalation of dust or mists can cause damage to the upper respiratory tract and to the lung tissue depending upon the extent of exposure.
INGESTION: Ingestion can cause very serious damage to the mouth, esophagus, stomach, and other tissues with which contact is made, and may be fatal.

EMERGENCY AND FIRST AID PROCEDURES
EYE CONTACT: Immediately flush eyes with plenty of water for at least 15 minutes. Hold eyelids open during this flushing with water. Call a physician immediately.
SKIN CONTACT: Flush area with water while removing contaminated clothing and shoes. Follow by washing with soap and water. Do not reuse clothing or shoes until cleaned. If irritation persists, get medical attention.
INGESTION: If conscious, drink a quart of water. DO NOT INDUCE VOMITING. Take immediately to a hospital or a physician. If unconscious or in convulsions, take immediately to a hospital or physician. Do not induce vomiting or give anything by mouth to an unconscious victim.
INHALATION: Remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen. CALL A PHYSICIAN.

SECTION VI - REACTIVITY DATA

STABILITY: X_STABLE ___UNSTABLE
CONDITIONS TO AVOID: HYGROSCOPIC MATERIAL. Avoid contact with moisture. Avoid elevated temperatures.

INCOMPATABILITY: Solutions of Sodium Bisulfate in water form Sulfuric
SECTION VI - REACTIVITY DATA

Acid which is incompatible with cyanides, sulfides, carbides, etc. Highly corrosive to most metals with extended period of contact.

HAZARDOUS DECOMPOSITION PRODUCTS: Can occur above 300 Deg. C. (572 Deg. F.) releasing toxic Sulfur Oxide gases.

HAZARDOUS POLYMERIZATION: MAY OCCUR WILL NOT OCCUR

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:
Evacuate unprotected personnel from area. Maintain adequate ventilation. Use proper Safety Equipment. Sweep up material into containers and dispose of properly. Flush remaining area with water and neutralize with Soda Ash or Lime and dispose of properly. Avoid direct discharge to sewers and surface waters. Notify authorities if entry occurs.

WASTE DISPOSAL METHOD: Observe all Local, State, and Federal Regulations. Dispose of at approved Landfill Site or Waste Treatment Facility. If approved, neutralize material and flush to sewer.

SECTION VIII - SPECIAL PROTECTION INFORMATION

CONSULT SAFETY EQUIPMENT DISTRIBUTOR

RESPIRATORY PROTECTION: If TLV is exceeded wear: NIOSH-Approved respirator for dusts and mists.

VENTILATION: Maintain adequate ventilation. Keep levels below recommended TLV. Avoid accumulation of dust. Avoid mist formation.

PROTECTIVE GLOVES: Rubber (Latex), Neoprene.
SECTION VIII - SPECIAL PROTECTION INFORMATION

EYE PROTECTION: Chemical Safety Goggles. Face shield.


SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:
HYGROSCOPIC MATERIAL. Avoid contact with moisture. Store in closed containers. Store away from incompatible materials.

OTHER PRECAUTIONS: Avoid contact with skin and eyes. Do not swallow. Use with adequate ventilation. Avoid prolonged or repeated breathing of vapors. Wash thoroughly after handling. Avoid dust or mist formation.

** ** ** ** ** ** ** ** ** **

The data in this Material Safety Data Sheet relates only to the specific material designated and does not relate to its use in combination with any other material or process. The data contained is believed to be correct. However, since conditions of use are outside our control it should not be taken as a warranty or representation for which Hydrite Chemical Co. assumes legal responsibility. This information is provided solely for your consideration, investigation, and verification.