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For Emergency Assistance involving chemicals call - CHEMTREC (800) 424-9300

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The Version Date for this MSDS is : 04/28/2000

PRODUCT NAME: SODIUM METABISULFITE

MSDS #: MZS4378

EFFECTIVE DATE: 4/27/00

SUPERSEDES: NEW

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SODIUM METABISULFITE

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#### 1. PRODUCT IDENTIFICATION

SYNONYMS: SODIUM PYROSULFITE; PYROSULFUROUS ACID, DISODIUM SALT  
CAS NO: 7681-57-4 SODIUM METABISULFITE; 7631-90-5 SODIUM  
BISULFITE.  
MOLECULAR WEIGHT: 190.13  
CHEMICAL FORMULA:  $\text{Na}_2\text{S}_2\text{O}_5$  (SODIUM METABISULFITE) AND  $\text{NaHSO}_3$  (SODIUM  
BISULFITE)

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#### 2. COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT	CAS NO	PERCENT	HAZARDOUS
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SODIUM METABISULFITE	7681-57-4	100%	YES
SODIUM BISULFITE	7631-90-5	< 0.001%	NO

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#### 3. HAZARDS IDENTIFICATION

##### EMERGENCY OVERVIEW

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WARNING! HARMFUL IF SWALLOWED OR INHALED. CAUSES IRRITATION TO SKIN, EYES  
AND RESPIRATORY TRACT. MAY CAUSE ALLERGIC RESPIRATORY REACTION. REACTS WITH  
ACIDS AND WATER RELEASING TOXIC SULFUR DIOXIDE GAS.

##### POTENTIAL HEALTH EFFECTS

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INHALATION:  
CAUSES IRRITATION TO THE RESPIRATORY TRACT. SYMPTOMS MAY INCLUDE COUGHING,  
SHORTNESS OF BREATH. MAY CAUSE ALLERGIC REACTION IN SENSITIVE INDIVIDUALS.

## INGESTION:

MAY CAUSE GASTRIC IRRITATION BY THE LIBERATION OF SULFUROUS ACID. AN ASTHMATIC REACTION MAY OCCUR AFTER INGESTION. LARGE DOSES MAY RESULT IN NAUSEA, VOMITING, DIARRHEA, ABDOMINAL PAINS, CIRCULATORY DISTURBANCE, AND CENTRAL NERVOUS SYSTEM DEPRESSION. ESTIMATED FATAL DOSE IS 10 GM.

## SKIN CONTACT:

CAUSES IRRITATION TO SKIN. SYMPTOMS INCLUDE REDNESS, ITCHING, AND PAIN.

## EYE CONTACT:

CAUSES IRRITATION, REDNESS, AND PAIN. CONTACT MAY CAUSE IRREVERSIBLE EYE DAMAGE. SYMPTOMS MAY INCLUDE STINGING, TEARING, REDNESS, SWELLING, CORNEAL DAMAGE AND BLINDNESS.

## CHRONIC EXPOSURE:

NO INFORMATION FOUND.

## AGGRAVATION OF PRE-EXISTING CONDITIONS:

SOME INDIVIDUALS ARE SAID TO BE DANGEROUSLY SENSITIVE TO MINUTE AMOUNTS OF SULFITES IN FOODS. SYMPTOMS MAY INCLUDE BRONCHO CONSTRICTION, SHOCK, GASTROINTESTINAL DISTURBANCES, ANGIO EDEMA, FLUSHING, AND TINGLING SENSATIONS. ONCE ALLERGY DEVELOPS, FUTURE EXPOSURES CAN CAUSE ASTHMA ATTACKS WITH SHORTNESS OF BREATH, WHEEZING, AND COUGH.

## 4. FIRST AID MEASURES

## INHALATION:

REMOVE TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN. GET MEDICAL ATTENTION.

## INGESTION:

INDUCE VOMITING IMMEDIATELY AS DIRECTED BY MEDICAL PERSONNEL. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. GET MEDICAL ATTENTION.

## SKIN CONTACT:

WIPE OFF EXCESS MATERIAL FROM SKIN THEN IMMEDIATELY FLUSH SKIN WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES. REMOVE CONTAMINATED CLOTHING AND SHOES. GET MEDICAL ATTENTION. WASH CLOTHING BEFORE REUSE. THOROUGHLY CLEAN SHOES BEFORE REUSE.

## EYE CONTACT:

IMMEDIATELY FLUSH EYES WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES, LIFTING LOWER AND UPPER EYELIDS OCCASIONALLY. GET MEDICAL ATTENTION IMMEDIATELY.

## 5. FIRE FIGHTING MEASURES

## FIRE:

NOT CONSIDERED TO BE A FIRE HAZARD.

## EXPLOSION:

NOT CONSIDERED TO BE AN EXPLOSION HAZARD.

## FIRE EXTINGUISHING MEDIA:

USE ANY MEANS SUITABLE FOR EXTINGUISHING SURROUNDING FIRE. DO NOT ALLOW

WATER RUNOFF TO ENTER SEWERS OR WATERWAYS.

SPECIAL INFORMATION:

IN THE EVENT OF A FIRE, WEAR FULL PROTECTIVE CLOTHING AND NIOSH-APPROVED SELF-CONTAINED BREATHING APPARATUS WITH FULL FACEPIECE OPERATED IN THE PRESSURE DEMAND OR OTHER POSITIVE PRESSURE MODE.

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6. ACCIDENTAL RELEASE MEASURES

VENTILATE AREA OF LEAK OR SPILL. WEAR APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT AS SPECIFIED IN SECTION 8. SPILLS: PICK UP AND PLACE IN A SUITABLE CONTAINER FOR RECLAMATION OR DISPOSAL, USING A METHOD THAT DOES NOT GENERATE DUST. CAUTIOUSLY SPRAY RESIDUE WITH PLENTY OF WATER, PROVIDING VENTILATION TO CLEAR SULFUR DIOXIDE FUMES GENERATED FROM WATER CONTACT. US REGULATIONS (CERCLA) REQUIRE REPORTING SPILLS AND RELEASES TO SOIL, WATER AND AIR IN EXCESS OF REPORTABLE QUANTITIES. THE TOLL FREE NUMBER FOR THE US COAST GUARD NATIONAL RESPONSE CENTER IS (800) 424-8802.

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7. HANDLING AND STORAGE

KEEP IN A TIGHTLY CLOSED CONTAINER. PROTECT FROM PHYSICAL DAMAGE. STORE IN A COOL, DRY, VENTILATED AREA AWAY FROM SOURCES OF HEAT, MOISTURE AND INCOMPATIBILITIES. RELEASES TOXIC SULFUR DIOXIDE GAS WHEN IN CONTACT WITH WATER, ICE. KEEP AWAY FROM ACIDS, WATER, ICE, AND OXIDIZING AGENTS. USE ONLY WITH APPROPRIATE PROTECTIVE EQUIPMENT. DO NOT USE IN UNVENTILATED AREAS SUCH AS HOLDS OF FISHING BOATS, WALK IN COOLERS OR CONFINED SPACES. CONTAINERS OF THIS MATERIAL MAY BE HAZARDOUS WHEN EMPTY SINCE THEY RETAIN PRODUCT RESIDUES (DUST, SOLIDS); OBSERVE ALL WARNINGS AND PRECAUTIONS LISTED FOR THE PRODUCT.

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

AIRBORNE EXPOSURE LIMITS:

-ACGIH THRESHOLD LIMIT VALUE (TLV):  
5MG/M3 (TWA) FOR SODIUM BISULFITE & FOR SODIUM METABISULFITE, A4 NOT CLASSIFIABLE AS A HUMAN CARCINOGEN.

VENTILATION SYSTEM:

A SYSTEM OF LOCAL AND/OR GENERAL EXHAUST IS RECOMMENDED TO KEEP EMPLOYEE EXPOSURES BELOW THE AIRBORNE EXPOSURE LIMITS. LOCAL EXHAUST VENTILATION IS GENERALLY PREFERRED BECAUSE IT CAN CONTROL THE EMISSIONS OF THE CONTAMINANT AT ITS SOURCE, PREVENTING DISPERSION OF IT INTO THE GENERAL WORK AREA. PLEASE REFER TO THE ACGIH DOCUMENT, "INDUSTRIAL VENTILATION, A MANUAL OF RECOMMENDED PRACTICES", MOST RECENT EDITION, FOR DETAILS.

PERSONAL RESPIRATORS (NIOSH APPROVED):

IF THE EXPOSURE LIMIT IS EXCEEDED, A HALF-FACE RESPIRATOR WITH AN ACID GAS CARTRIDGE MAY BE WORN FOR UP TO TEN TIMES THE EXPOSURE LIMIT OR THE MAXIMUM USE CONCENTRATION SPECIFIED BY THE APPROPRIATE REGULATORY AGENCY OR RESPIRATOR SUPPLIER, WHICHEVER IS LOWEST. A FULL-FACE PIECE RESPIRATOR WITH AN ACID GAS CARTRIDGE MAY BE WORN UP TO 50 TIMES THE EXPOSURE LIMIT, OR THE MAXIMUM USE CONCENTRATION SPECIFIED BY THE APPROPRIATE REGULATORY AGENCY, OR RESPIRATOR SUPPLIER, WHICHEVER IS LOWEST. FOR EMERGENCIES OR INSTANCES WHERE THE EXPOSURE LEVELS ARE NOT KNOWN, USE A FULL-FACEPIECE

POSITIVE-PRESSURE, AIR-SUPPLIED RESPIRATOR. WARNING: AIR-PURIFYING RESPIRATORS DO NOT PROTECT WORKERS IN OXYGEN-DEFICIENT ATMOSPHERES.

SKIN PROTECTION:

WEAR IMPERVIOUS PROTECTIVE CLOTHING, INCLUDING BOOTS, GLOVES, LAB COAT, APRON OR COVERALLS, AS APPROPRIATE, TO PREVENT SKIN CONTACT. (NEOPRENE, POLYVINYL CHLORIDE).

EYE PROTECTION:

USE CHEMICAL SAFETY GOGGLES AND/OR FULL FACE SHIELD WHERE DUSTING OR SPLASHING OF SOLUTIONS IS POSSIBLE. MAINTAIN EYE WASH FOUNTAIN AND QUICK-DRENCH FACILITIES IN WORK AREA.

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9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:  
WHITE TO YELLOW WHITE CRYSTALLINE  
GRANULES.

BOILING POINT:  
NOT APPLICABLE.

ODOR:  
SLIGHT ODOR OF SULFUR DIOXIDE.

MELTING POINT:  
150C (302F)

SOLUBILITY:  
VERY SOLUBLE IN WATER, INSOLUBLE  
IN ALCOHOL.

VAPOR DENSITY (AIR=1):  
NO INFORMATION FOUND.

SPECIFIC GRAVITY:  
1.48

VAPOR PRESSURE (MM HG):  
NO INFORMATION FOUND.

PH:  
AQUEOUS SOLUTION IS ACIDIC.

EVAPORATION RATE (BUAC=1):  
NO INFORMATION FOUND.

% VOLATILES BY VOLUME @ 21C (70F):  
0

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10. STABILITY AND REACTIVITY

STABILITY:

STRENGTH DIMINISHES SOMEWHAT WITH AGE. GRADUALLY DECOMPOSES IN AIR TO SULFATE, GENERATING SULFUROUS ACID GAS. CONTACT WITH MOISTURE (WATER, WET ICE, ETC.), WILL RELEASE TOXIC SULFUR DIOXIDE GAS.

HAZARDOUSS DECOMPOSITION PRODUCTS:

OXIDES OF SULFUR AND SODIUM MAY FORM WHEN HEATED TO DECOMPOSITION.

HAZARDOUSS POLYMERIZATION:

WILL NOT OCCUR.

INCOMPATIBILITIES:

WATER, ACIDS, ALKALIS, SODIUM NITRITE, OXIDIZERS, ALUMINUM POWDER.

CONDITIONS TO AVOID:

MOISTURE, HEAT, FLAMES, IGNITION SOURCES AND INCOMPATIBLES.

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## 11. TOXICOLOGICAL INFORMATION

SODIUM METABISULFITE 7681-57-4: NO LD50/LC50 INFORMATION FOUND RELATING TO NORMAL ROUTES OF OCCUPATIONAL EXPOSURE. INVESTIGATED AS A TUMORIGEN, MUTAGEN AND REPRODUCTIVE EFFECTOR. SODIUM BISULFITE 7631-90-5: ORAL RAT LD50: 2000 MG/KG. INVESTIGATED AS A TUMORIGEN AND MUTAGEN.

-----/CANCER LISTS/-----			
---NTP CARCINOGEN---			
INGREDIENT	KNOWN	ANTICIPATED	IARC CATEGORY
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SODIUM METABISULFITE (7681-57-4)	NO	NO	3
SODIUM BISULFITE (7631-90-5)	NO	NO	3

## 12. ECOLOGICAL INFORMATION

ENVIRONMENTAL FATE:  
NO INFORMATION FOUND.

ENVIRONMENTAL TOXICITY:  
NO INFORMATION FOUND.

## 13. DISPOSAL CONSIDERATIONS

WHATEVER CANNOT BE SAVED FOR RECOVERY OR RECYCLING SHOULD BE MANAGED IN AN APPROPRIATE AND APPROVED WASTE DISPOSAL FACILITY. PROCESSING, USE OR CONTAMINATION OF THIS PRODUCT MAY CHANGE THE WASTE MANAGEMENT OPTIONS. STATE AND LOCAL DISPOSAL REGULATIONS MAY DIFFER FROM FEDERAL DISPOSAL REGULATIONS.

DISPOSE OF CONTAINER AND UNUSED CONTENTS IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REQUIREMENTS.

## 14. TRANSPORT INFORMATION

NOT REGULATED.

## 15. REGULATORY INFORMATION

-----/CHEMICAL INVENTORY STATUS - PART 1/-----				
INGREDIENT	TSCA	EC	JAPAN	AUSTRALIA
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SODIUM METABISULFITE (7681-57-4)	YES	YES	YES	YES
SODIUM BISULFITE (7631-90-5)	YES	YES	YES	YES

-----/CHEMICAL INVENTORY STATUS - PART 2/-----				
--CANADA--				
INGREDIENT	KOREA	DSL	NDSL	PHIL.
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SODIUM METABISULFITE (7681-57-4)	YES	YES	NO	YES
SODIUM BISULFITE (7631-90-5)	YES	YES	NO	YES

-----/FEDERAL, STATE & INTERNATIONAL REGULATIONS - PART 1/-----

INGREDIENT	-SARA 302- RQ	TPQ	-----SARA 313----- LIST	CHEMICAL CATG
SODIUM METABISULFITE (7681-57-4)	NO	NO	NO	NO
SODIUM BISULFITE (7631-90-5)	NO	NO	NO	NO

-----/FEDERAL, STATE & INTERNATIONAL REGULATIONS - PART 2/-----

INGREDIENT	CERCLA	-RCRA- 261.33	-TSCA- 8 (D)
SODIUM METABISULFITE (7681-57-4)	NO	NO	YES
SODIUM BISULFITE (7631-90-5)	5000	NO	YES

CHEMICAL WEAPONS CONVENTION: NO      TSCA 12(B): NO      CDTA: NO  
 SARA 311/312: ACUTE: YES      CHRONIC: NO      FIRE: NO      PRESSURE: NO  
 REACTIVITY: YES      (MIXTURE / SOLID)

AUSTRALIAN HAZCHEM CODE: NO INFORMATION FOUND.  
 POISON SCHEDULE: NO INFORMATION FOUND.

WHMIS: THIS MSDS HAS BEEN PREPARED ACCORDING TO THE HAZARD CRITERIA OF  
 THE CONTROLLED PRODUCTS REGULATIONS (CPR) AND THE MSDS CONTAINS  
 ALL OF THE INFORMATION REQUIRED BY THE CPR.

#### 16. OTHER INFORMATION

##### NFPA RATINGS:

HEALTH: 3    FLAMMABILITY: 0    REACTIVITY: 1

##### LABEL HAZARD WARNING:

WARNING! HARMFUL IF SWALLOWED OR INHALED. CAUSES IRRITATION TO SKIN, EYES  
 AND RESPIRATORY TRACT. MAY CAUSE ALLERGIC RESPIRATORY REACTION. REACTS WITH  
 ACIDS AND WATER RELEASING TOXIC SULFUR DIOXIDE GAS.

##### LABEL PRECAUTIONS:

AVOID CONTACT WITH EYES, SKIN AND CLOTHING.  
 AVOID BREATHING DUST.  
 KEEP CONTAINER CLOSED.  
 USE ONLY WITH ADEQUATE VENTILATION.

WASH THOROUGHLY AFTER HANDLING.

FOR REAGENT AND TECHNICAL GRADES: NOT FOR FOOD USE. FOR TAC GRADES: DO NOT  
 USE IN MEATS OR IN FOODS RECOGNIZED AS A SOURCE OF VITAMIN B-1, NOR IN  
 FRUITS OR VEGETABLES TO BE SERVED OR SOLD RAW TO CONSUMERS OR TO BE  
 PRESENTED TO CONSUMERS AS FRESH.

##### LABEL FIRST AID:

IF SWALLOWED, INDUCE VOMITING IMMEDIATELY AS DIRECTED BY MEDICAL PERSONNEL.  
 NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. IF INHALED, REMOVE  
 TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. IF BREATHING  
 IS DIFFICULT, GIVE OXYGEN. IN CASE OF CONTACT, WIPE OFF EXCESS MATERIAL  
 FROM SKIN THEN IMMEDIATELY FLUSH EYES OR SKIN WITH PLENTY OF WATER FOR AT  
 LEAST 15 MINUTES. REMOVE CONTAMINATED CLOTHING AND SHOES. WASH CLOTHING  
 BEFORE REUSE. IN ALL CASES, GET MEDICAL ATTENTION.

##### For Additional Information:

Contact: MSDS Coordinator - Vopak USA

During business hours, Pacific Time - (425) 889-3400

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END OF MSDS