1 - Site Specific Information

No SITE SPECIFIC INFORMATION has been entered for this chemical

2 - PRODUCT IDENTIFICATION

PRODUCT NAME: BARIUM SULFATE

COMMON SYNONYMS: BARITE

CHEMICAL FAMILY: BARIUM COMPOUNDS

FORMULA: BASO4
FORMULA WT.: 233.40
CAS NO.: 7727-43-7
NIOSH/RTECS NO.: CR0600000

PRODUCT USE: LABORATORY REAGENT

PRODUCT CODES: 1030,1040

CHEMTREC # (800) 424-9300

NATIONAL RESPONSE CENTER # (800) 424-8802

J.T.BAKER INC.

222 RED SCHOOL LANE

PHILLIPSBURG, NJ 08865

24-HOUR EMERGENCY TELEPHONE -- (201) 859-2151

EFFECTIVE: 07/19/94 ISSUED: 10/01/94

REVISION #06

PRECAUTIONARY LABELING

BAKER SAF-T-DATA* SYSTEM

HEALTH - 1 SLIGHT
FLAMMABILITY - 0 NONE
REACTIVITY - 0 NONE
CONTACT - 0 NONE

LABORATORY PROTECTIVE EQUIPMENT

GOGGLES; LAB COAT; VENT HOOD; PROPER GLOVES

U.S. PRECAUTIONARY LABELING

DURING USE AVOID CONTACT WITH EYES, SKIN, CLOTHING. WASH THOROUGHLY AFTER HANDLING. WHEN NOT IN USE KEEP IN TIGHTLY CLOSED CONTAINER.

INTERNATIONAL LABELING

2 - PRODUCT IDENTIFICATION (continued)

HARMFUL BY INHALATION AND IF SWALLOWED. AFTER CONTACT WITH SKIN, WASH IMMEDIATELY WITH PLENTY OF SOAP AND WATER.

SAF-T-DATA* STORAGE COLOR CODE: ORANGE (GENERAL STORAGE)

3 - COMPONENTS

COMPONENT BARIUM SULFATE CAS NO. 7727-43-7 97-100 10 MG/M 10 MG/M

WEIGHT % OSHA/PEL

ACGIH/TLV

4 - PHYSICAL DATA

BOILING POINT: N/A

VAPOR PRESSURE (MMHG): N/A

MELTING POINT: 1580 C (2876 F)

VAPOR DENSITY (AIR=1): N/A

(AT 760 MM HG)

SPECIFIC GRAVITY: 4.50

(H2O=1)

EVAPORATION RATE: N/A

SOLUBILITY (H20): NEGLIGIBLE (<0.1%)

% VOLATILES BY VOLUME: 0

(21 C)

PH: N/A

ODOR THRESHOLD (P.P.M.): N/A

PHYSICAL STATE: SOLID

COEFFICIENT WATER/OIL DISTRIBUTION: N/A

APPEARANCE & ODOR: WHITE POWDER. ODORLESS.

5 - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (CLOSED CUP): N/A

AUTOIGNITION TEMPERATURE: N/A

5 - FIRE AND EXPLOSION HAZARD DATA (continued)

FLAMMABLE LIMITS: UPPER - N/A LOWER - N/A

FIRE EXTINQUISHING MEDIA USE EXTINGUISHING MEDIA APPROPRIATE FOR SURROUNDING FIRE.

SPECIAL FIRE-FIGHTING PROCEDURES FIREFIGHTERS SHOULD WEAR PROPER PROTECTIVE EQUIPMENT AND SELF-CONTAINED BREATHING APPARATUS WITH FULL FACEPIECE OPERATED IN POSITIVE PRESSURE MODE.

UNUSUAL FIRE & EXPLOSION HAZARDS NONE IDENTIFIED.

TOXIC GASES PRODUCED SULFUR DIOXIDE

EXPLOSION DATA-SENSITIVITY TO MECHANICAL IMPACT NONE IDENTIFIED.

EXPLOSION DATA-SENSITIVITY TO STATIC DISCHARGE NONE IDENTIFIED.

6 - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE (TLV/TWA): 10 MG/M

SHORT-TERM EXPOSURE LIMIT (STEL): NOT ESTABLISHED

PERMISSIBLE EXPOSURE LIMIT (PEL): 10 MG/M

TOXICITY OF COMPONENTS

NO INFORMATION IS AVAILABLE

CARCINGENICITY: NTP: NO IARC: NO Z LIST: NO OSHA REG: NO

CARCINOGENICITY NONE IDENTIFIED.

REPRODUCTIVE EFFECTS NONE IDENTIFIED.

EFFECTS OF OVEREXPOSURE

6 - HEALTH HAZARD DATA (continued)

INHALATION:

TIGHTNESS AND PAIN IN CHEST, COUGHING, DIFFICULT

SKIN CONTACT:

NONE IDENTIFIED

EYE CONTACT: IRRITATION

SKIN ABSORPTION: NONE IDENTIFIED

INGESTION:

NONE IDENTIFIED

CHRONIC EFFECTS: NONE IDENTIFIED

TARGET ORGANS

NONE IDENTIFIED

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE

NONE IDENTIFIED

PRIMARY ROUTES OF ENTRY

INHALATION, EYE CONTACT

EMERGENCY AND FIRST AID PROCEDURES

INGESTION:

IF SWALLOWED AND THE PERSON IS CONSCIOUS, IMMEDIATELY GIVE

LARGE AMOUNTS OF WATER. GET MEDICAL ATTENTION.

INHALATION: IF A PERSON BREATHES IN LARGE AMOUNTS, MOVE THE EXPOSED

PERSON TO FRESH AIR.

SKIN CONTACT: IN CASE OF CONTACT, IMMEDIATELY WASH SKIN WITH PLENTY OF

SOAP AND WATER FOR AT LEAST 15 MINUTES.

EYE CONTACT:

IN CASE OF EYE CONTACT, IMMEDIATELY FLUSH WITH PLENTY OF

WATER FOR AT LEAST 15 MINUTES.

SARA/TITLE III HAZARD CATEGORIES AND LISTS

ACUTE: YES CHRONIC: YES FLAMMABILITY: NO PRESSURE: NO REACTIVITY: NO

EXTREMELY HAZARDOUS SUBSTANCE: NO

CERCLA HAZARDOUS SUBSTANCE:

SARA 313 TOXIC CHEMICALS:

NO NO

GENERIC CLASS:

GENERIC CLASS REMOVED FROM CFR: 7/1/91

Date Printed: 01-09-1998 Page 5 J.T.BAKER MSDS MSDS for BARIUM SULFATE 6 - HEALTH HAZARD DATA (continued) YES TSCA INVENTORY: 7 - REACTIVITY DATA HAZARDOUS POLYMERIZATION: WILL NOT OCCUR STABILITY: STABLE CONDITIONS TO AVOID: NONE DOCUMENTED ALUMINUM, PHOSPHORUS INCOMPATIBLES: DECOMPOSITION PRODUCTS: OXIDES OF SULFUR 8 - SPILL & DISPOSAL PROCEDURES STEPS TO BE TAKEN IN THE EVENT OF A SPILL OR DISCHARGE WEAR SUITABLE PROTECTIVE CLOTHING. CAREFULLY SWEEP UP AND REMOVE. DISPOSAL PROCEDURE DISPOSE IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL ENVIRONMENTAL REGULATIONS. 9 - INDUSTRIAL PROTECTIVE EQUIPMENT USE ADEQUATE GENERAL OR LOCAL EXHAUST VENTILATION TO VENTILATION: KEEP FUME OR DUST LEVELS AS LOW AS POSSIBLE.

RESPIRATORY PROTECTION: NONE REQUIRED WHERE ADEQUATE VENTILATION CONDITIONS

EXIST. IF AIRBORNE CONCENTRATION IS HIGH, USE AN

APPROPRIATE RESPIRATOR OR DUST MASK.

EYE/SKIN PROTECTION: SAFETY GOGGLES, PROPER GLOVES ARE RECOMMENDED.

10 - STORAGE AND HANDLING PRECAUTIONS

SAF-T-DATA* STORAGE COLOR CODE: ORANGE (GENERAL STORAGE)

10 - STORAGE AND HANDLING PRECAUTIONS (continued)

STORAGE REQUIREMENTS

KEEP CONTAINER TIGHTLY CLOSED. SUITABLE FOR ANY GENERAL CHEMICAL STORAGE AREA.

11 - TRANSPORTATION DATA AND ADDITIONAL INFORMATION

DOMESTIC (D.O.T.)

PROPER SHIPPING NAME: CHEMICALS, N.O.S. (NON-REGULATED)

INTERNATIONAL (I.M.O.)

PROPER SHIPPING NAME: CHEMICALS, N.O.S. (NON-REGULATED)
MARINE POLLUTANTS: NO

AIR (I.C.A.O.)

PROPER SHIPPING NAME: CHEMICALS, N.O.S. (NON-REGULATED)

U.S. CUSTOMS HARMONIZATION NUMBER: 28332700008

NOTE: WHEN HANDLING LIQUID PRODUCTS, SECONDARY PROTECTIVE CONTAINERS MUST BE USED FOR CARRYING.

N/A = NOT APPLICABLE, OR NOT AVAILABLE

N/E = NOT ESTABLISHED.

THE INFORMATION IN THIS MATERIAL SAFETY DATA SHEET MEETS THE REQUIREMENTS OF THE UNITED STATES OCCUPATIONAL SAFETY AND HEALTH ACT AND REGULATIONS PROMULGATED THEREUNDER (29 CFR 1910.1200 ET. SEQ.) AND THE CANADIAN WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM. THIS DOCUMENT IS INTENDED ONLY AS A GUIDE TO THE APPROPRIATE PRECAUTIONARY HANDLING OF THE MATERIAL BY A PERSON TRAINED IN, OR SUPERVISED BY A PERSON TRAINED IN, CHEMICAL HANDLING. THE USER IS RESPONSIBLE FOR DETERMINING THE PRECAUTIONS AND DANGERS OF THIS CHEMICAL FOR HIS OR HER PARTICULAR APPLICATION. DEPENDING ON USAGE, PROTECTIVE CLOTHING INCLUDING EYE AND FACE GUARDS AND RESPIRATORS MUST BE USED TO AVOID CONTACT WITH MATERIAL OR BREATHING CHEMICAL VAPORS/FUMES.

EXPOSURE TO THIS PRODUCT MAY HAVE SERIOUS ADVERSE HEALTH EFFECTS. THIS CHEMICAL MAY INTERACT WITH OTHER SUBSTANCES. SINCE THE POTENTIAL USES ARE SO VARIED, BAKER CANNOT WARN OF ALL OF THE POTENTIAL DANGERS OF USE OR

11 - TRANSPORTATION DATA AND ADDITIONAL INFORMATION (continued)

INTERACTION WITH OTHER CHEMICALS OR MATERIALS. BAKER WARRANTS THAT THE CHEMICAL MEETS THE SPECIFICATIONS SET FORTH ON THE LABEL.

BAKER DISCLAIMS ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, WITH REGARD TO THE PRODUCT SUPPLIED HEREUNDER, ITS MERCHANTABILITY OR ITS FITNESS FOR A PARTICULAR PURPOSE.

THE USER SHOULD RECOGNIZE THAT THIS PRODUCT CAN CAUSE SEVERE INJURY AND EVEN DEATH, ESPECIALLY IF IMPROPERLY HANDLED OR THE KNOWN DANGERS OF USE ARE NOT HEEDED. READ ALL PRECAUTIONARY INFORMATION. AS NEW DOCUMENTED GENERAL SAFETY INFORMATION BECOMES AVAILABLE, BAKER WILL PERIODICALLY REVISE THIS MATERIAL SAFETY DATA SHEET.

NOTE: CHEMTREC, CANUTEC, AND NATIONAL RESPONSE CENTER EMERGENCY TELEPHONE NUMBERS ARE TO BE USED ONLY IN THE EVENT OF CHEMICAL EMERGENCIES INVOLVING A SPILL, LEAK, FIRE, EXPOSURE, OR ACCIDENT INVOLVING CHEMICALS. ALL NON-EMERGENCY QUESTIONS SHOULD BE DIRECTED TO CUSTOMER SERVICE (1-800-JTBAKER) ASSISTANCE.

COPYRIGHT 1994 J.T.BAKER INC. * TRADEMARKS OF J.T.BAKER INC.

APPROVED BY QUALITY ASSURANCE DEPARTMENT.