FREX-SCIENTIFIC -- SULFUR:ROLL, SUBLIMED PWD., PRECIPITATED, 79182 - SULFUR, TECHNICAL FREY SCIENTIFIC -- SULFUR: ROLL, SUBLIMED PWD., PRECIPITATED, 79182 - SULFUR, TECHNICAL MATERIAL SAFETY DATA SHEET N: 6810002646577 anufacturer's CAGE: 6U218 Part No. Indicator: A Part Number/Trade Name: SULFUR: ROLL, SUBLIMED PWD., PRECIPITATED, 79182 General Information Company's Name: FREY SCIENTIFIC FISHER Company's Street: 905 HICKORY LANE Company's City: MANSFIELD Company's State: OH Company's Country: US Company's Zip Code: 44905 Company's Emerg Ph #: 419-589-1900/800-424-9300(CHEMTREC) Company's Info Ph #: 419-589-9905/716-226-6177/334-4222 Record No. For Safety Entry: 003 Tot Safety Entries This Stk#: 004 Status: SE Date MSDS Prepared: 09DEC94 Safety Data Review Date: 06JUL95 Supply Item Manager: CX MSDS Preparer's Name: MICHAEL RASZEJA MSDS Serial Number: BXCNG Specification Number: NONE ec Type, Grade, Class: NONE zard Characteristic Code: F7 Unit Of Issue: BT Unit Of Issue Container Qty: 5.0 LBS Type Of Container: BOTTLE

Net Unit Weight: 5.0 LBS

NRC/State License Number: NOT RELEVANT

Ingredients/Identity Information

Proprietary: NO Ingredient: SULFUR

Ingredient Sequence Number: 01

Percent: 100

NIOSH (RTECS) Number: WS4250000

CAS Number: 7704-34-9 OSHA PEL: NOT ESTABLISHED ACGIH TLV: NOT ESTABLISHED

Other Recommended Limit: NONE RECOMMENDED

Physical/Chemical Characteristics

Appearance And Odor: YELLOW POWDER, CRYSTALS OR ROLLS - CHARACTERISTIC

SULFUR ODOR

Boiling Point: 832F,444C Melting Point: 233F - 246F

por Pressure (MM Hg/70 F): <.0001@68F

Specific Gravity: 1.92 - 2.07

Evaporation Rate And Ref: NOT RELEVANT

Solubility In Water: INSOLUBLE

Percent Volatiles By Volume: NEGLIG

Viscosity: NOT RELEVANT

Corrosion Rate (IPY): UNKNOWN Autoignition Temperature: 450F

Fire and Explosion Hazard Data

Flash Point: 405F,207C Flash Point Method: CC

Lower Explosive Limit: 35 G/M3 Upper Explosive Limit: 1400 G/M3

Extinguishing Media: USE WATER SPRAY OR FOG. FOR SMALL FIRE USE SAND OR ADDITIONAL SULFUR. USE WATER SPRAY TO COOL FIRE EXPOSED CONTAINERS. Special Fire Fighting Proc: WEAR PROTECTIVE CLOTHING AND NIOSH-APPROVED SELF-CONTAINED BREATHING APPARATUS. AVOID STRAIGHT STREAM OF WATER WHICH

WILL SCATTER MOLTEN SULFUR AND DUST.

Unusual Fire And Expl Hazrds: DUST OR VAPOR FORMS EXPLOSIVE MIXTURES WITH AIR. IT EMITS TOXIC GASES OF SULFUR OXIDES.

Reactivity Data

Stability: YES

Cond To Avoid (Stability): EXCESSIVE HEAT

Materials To Avoid: STRONG OXIDIZING AGENTS SUCH AS NITRATES AND

CHLORATES, STRONG BASES

Hazardous Decomp Products: SULFUR DIOXIDE GAS

Hazardous Poly Occur: NO

Conditions To Avoid (Poly): NOT RELEVANT

Health Hazard Data

LD50-LC50 Mixture: LD50 (ORAL, RAT) IS NOT KNOWN.

Route Of Entry - Inhalation: YES

Route Of Entry - Skin: NO

Route Of Entry - Ingestion: NO

Health Haz Acute And Chronic: TARGET ORGANS: EYE AND RESPIRATORY TRACT.

ACUTE- SULFUR IS ESSENTIALLY NON-TOXIC EITHER THROUGH INGESTION, INHALATION OR SKIN CONTACT. THERE ARE, HOWEVER, SOME INDIVIDUALS WHO MAY BE ALLERGIC.

SULFUR IS AN EYE IRRITANT. DUST MAY IRRITATE UPPER RESPIRATORY TRACT.

CHRONIC- UNKNOWN.

Carcinogenicity - NTP: NO Carcinogenicity - TARC: NO Carcinogenicity - OSHA: NO

Explanation Carcinogenicity: NONE Signs/Symptoms Of Overexp: IRRITATION

Med Cond Aggravated By Exp: PERSONS WITH SENSITIVITY TO SULFUR

Med Cond Aggravated By Exp: PERSONS WITH SENSITIVITY TO SOLFOR Emergency/First Aid Proc: GET MEDICAL HELP IF SYMPTOMS PERSIST.

INHALED: REMOVE TO FRESH AIR. PROVIDE CPR/OXYGEN IF NEEDED. EYES: FLUSH WITH FLUSH WITH WATER FOLLOWED BY WASHING SKIN WITH SOAP & WATER. ORAL: IF CONSCIOUS, DRINK TWO TO THREE GLASSES OF WATER OR MILK. GET MEDICAL

ATTENTION IMMEDIATELY.

Precautions for Safe Handling and Use

Steps If Matl Released/Spill: WEAR PROPER PROTECTIVE CLOTHING AND EQUIPMENTS. VENTILATE AREA. SWEEP UP AND PLACE IN A SUITABLE CONTAINER FOR

RECYCLING OR DISPOSAL. AVOID GENERATING DUST. POWDERED SULFUR SHOULD NOT BE SCATTERED NOR ALLOWED TO ACCUMULATE ON SURFACES FROM SPILLS.

Neutralizing Agent: NOT RELEVANT

Aste Disposal Method: DISPOSE OF IN ACCORDANCE WITH ALL LOCAL, STATE AND EDERAL REGULATIONS. DISPOSE OF IN A SANITARY LANDFILL AFTER MIXING 3 PARTS BY WEIGHT OF CALCIUM CARBONATE TO NEUTRALIZE THE SLOW GENERATION OF SULFURIC ACID.

Precautions-Handling/Storing: STORE IN COOL, DRY, VENTILATED PLACE AWAY FROM FIRE, SPARK, INCOMPATIBLE MATERIALS. ALL ELECTRIC MOTORS IN THE AREA SHOULD BE OF EXPLOSIVE PROOF TYPE.

Other Precautions: AVOID BREATHING DUSTS. DO NOT GET IN EYES, ON SKIN OR ON CLOTHING. WASH THOROUGHLY AFTER HANDLING. KEEP OUT OF REACH OF CHILDREN. USE IN WELL VENTILATED AREA. WASH CONTAMINATED CLOTHING BEFORE REUSE. FOR LABORATORY USE ONLY.

Control Measures

Respiratory Protection: NONE SHOULD BE NEEDED IN NORMAL LABORATORY HANDLING. IF DUSTY CONDITIONS PREVAIL, WORK IN FUME HOOD OR WEAR A NIOSHAPPROVED RESPIRATOR FOR DUST OR FUMES.

Ventilation: USE GENERAL OR LOCAL EXHAUST VENTILATION TO MEET TLV REQUIREMENTS.

Protective Gloves: RUBBER

Eve Protection: CHEMICAL GOGGLES/SAFETY GLASSES

Other Protective Equipment: PROTECTIVE CLOTHING AS NEEDED TO PREVENT PROLONGED/REPEATED SKIN CONTACT, EYE WASH STATION AND SAFETY SHOWER. Work Hygienic Practices: OBSERVE GOOD INDUSTRIAL HYGIENE PRACTICES AND RECOMMENDED PROCEDURES. WASH THOROUGHLY BEFORE EATING, DRINKING/SMOKING.

Transportation Data

Trans Data Review Date: 95187

DOT PSN Code: NSI

DOT Proper Shipping Name: SULFUR

DOT Class: 4.1

DOT ID Number: UN1350 DOT Pack Group: III

DOT Label: FLAMMABLE SOLID

IMO PSN Code: OED

IMO Proper Shipping Name: SULPHUR, IMO Regulations Page Number: 4174

IMO UN Number: 1350 IMO UN Class: 4.1

IMO Subsidiary Risk Label: -

IATA PSN Code: XHO

IATA UN ID Number: 1350

IATA Proper Shipping Name: SULPHUR

IATA UN Class: 4.1

IATA Label: FLAMMABLE SOLID

AFI PSN Code: XHO

AFI Prop. Shipping Name: SULPHUR

AFI Class: 4.1

AFI ID Number: UN1350 *FI Pack Group: III I Special Prov: A1 AFI Basic Pac Ref: 8-7

AFI Basic Pac Ref: 8-7

Disposal Data

Label Data

Label Required: YES

Technical Review Date: 06JUL95 MFR Label Number: NOT RELEVANT

Label Status: F

Common Name: SULFUR: ROLL, SUBLIMED PWD., PRECIPITATED, 79182

Signal Word: CAUTION!

Acute Health Hazard-Slight: X

Contact Hazard-Slight: X Fire Hazard-Slight: X Reactivity Hazard-None: X

Special Hazard Precautions: TARGET ORGANS:EYE & RESPIRATORY TRACT. ACUTE-SULFUR IS ESSENTIALLY NON-TOXIC EITHER THROUGH INGESTION, INHALATION/SKIN CONTACT. IT IS AN EYE IRRITANT. DUST MAY IRRITATE UPPER RESPIRATORY TRACT. CHRONIC- UNKNOWN. STORE IN COOL, DRY, VENTILATED PLACE AWAY FROM FIRE, SPARK, INCOMPATIBLES. SWEEP UP SPILL & PLACE IN SUITABLE CONTAINER. FIRST AID- GET MEDICAL HELP IF SYMPTOMS PERSIST. INHALED:REMOVE TO FRESH AIR. PROVIDE CPR/OXYGEN IF NEEDED. EYES:FLUSH WITH WATER FOR 15 MINUTES. HOLD EYELIDS OPEN. SKIN:FLUSH WITH WATER. THEN, WASH SKIN WITH SOAP & WATER. ORAL:IF CONSCIOUS, DRINK 2-3 GLASSES OF WATER OR MILK. GET MEDICAL ATTENTION IMMEDIATELY.

Protect Eye: Y Protect Skin: Y

Label Name: FREY SCIENTIFIC Label Street: 905 HICKORY LANE

Label City: MANSFIELD

Label State: OH

Label Zip Code: 44905

Label Country: US

Label Emergency Number: 419-589-1900/800-424-9300(CHEMTREC)

Year Procured: 1995