FISHER SCIENTIFIC CO -- BROMINE, CAT NO B38550 -- 6810-00-261-9235

Product ID:BROMINE, CAT NO B38550 MSDS Date:03/14/1990 FSC:6810 NIIN:00-261-9235 MSDS Number: BMCBP === Responsible Party === Company Name: FISHER SCIENTIFIC CO Address:585 ALPHA DR City:PITTSBURGH State:PA ZIP:15238-2911 Country:US CAGE:22527 === Contractor Identification === Company Name: FISHER S **CIENTIFIC CO** Address:2000 PARK LN Box:City:PITTSBURGH State:PA ZIP:15275 Country:US Phone:412-490-8586 CAGE:22527

Ingred Name:BROMINE (SARA III) CAS:7726-95-6 RTECS #:EF9100000 Fraction by Wt: 100% Other REC Limits:NONE SPECIFIED OSHA PEL:0.1PPM/0.3 STEL ACGIH TLV:O.1PPM/0.3 STEL;9192

LD50 LC50 Mixture:LCL0 (ORAL-HUMAN) IS 14 MG/KG. Routes of Entry: Inhal

ation:YES Skin:YES Ingestion:YES Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO Health Hazards Acute and Chronic: ACUTE/CHRONIC: RESPIRATORY DIFFICULTY WITH ASTHMA, CREPITATIONS IN THE LUNGS & A GENERALIZED VESICULAR OR MORBILLIFORM RASH, INFLAMMATORY LESIONS OF THE MUCOUS MEMBRANES & FATAL CHEMICAL BURNS OF THE LUNGS, ANOREXIA, INDIGESTION, IRRITABILITY, DEEP SURFACE SKIN BURNS, SLOW HEALING ULCERS, SEVERE **GASTROENTERITIS & DEATH** Explanation of Carcinogenicity:THIS C **OMPOUND CONTAINS NO INGREDIENTS AT** CONCENTRATIONS OF 0.1% OR GREATER THAT ARE CARCINOGENS OR SUSPECT CARCINOGENS. Effects of Overexposure: MAY CAUSE HEADACHE, DIZZINESS, COUGHING, NAUSEA, COPIOUS MUCOUS SECRETION, NOSEBLEED, FEELING OF OPPRESSION, VERTIGO, STOMACH PAINS, HOARSENESS, CHEST PAIN, JOINT PAIN, BROWN SKIN DISCOLORATION, SECON D & THIRD DEGREE BURNS, EYE BURNS, INFLAMED TONGUE, SPASMS, PAIN IN THE HEART REGION, LOSS OF APPETITE. Medical Cond Aggravated by Ex posure:NONE SPECIFIED BY MANUFACTURER.

First Aid:EYES: WASH IMMEDIATELY WITH WATER OR NORMAL SALINE, FOR 15-20 MINUTES UNTIL PH IS NORMAL. SEE DOCTOR QUICKLY. SKIN: WASH WITH SOAP AND WATER. REMOVE SOILED CLOTHES. GET MEDICAL ADVICE. INHALE: REMOVE TO FRESH AIR. IF BREATHING STOPS, GIVE CPR. SEEE DOCTOR IMMEDIATELY. INGEST: DO NOT USE GASTRIC LAVAGE OR EMISIS. DILUTE BY DRINKING LARGE AMOUNTS OF WATER OR MILK. GET IMMEDIATE MEDICAL

ATTENTION.

Flash Point:18.9F,-7.3C

Extinguishing Media:DRY CHEMICAL, CARBON DIOXIDE, HALON, WATER SPRAY OR ALCOHOL FOAM. LARGER FIRES, USE WATER SPARY, FOG OR STANDARD FOAM. Fire Fighting Procedures:MOVE CONTAINERS FROM FIRE AREA IF POSSIBLE. DIKE FIRE CONTROL WATER. DO NOT SCATTER MATERIAL. COOL FIRE EXPOSED CONTAINERS WITH WATER FROM SIDE. KEEP UPWIND. Unusual Fire/Explosion Hazar

d:NEGLIGIBLE FIRE HAZARD WHEN EXPOSED TO HEAT OR FLAME. AVOID BREATHING POISONOUS & CORROSIVE VAPORS. EVACUATE TO A RADIUS OF 2500 FEET FOR LEAKS.

Spill Release Procedures: DO NOT TOUCH SPILLED MATERIAL. STOP LEAK. USE WATER SPRAY TO REDUCE VAPORS. TAKE UP WITH SAND OR OTHER ABSORBENT MATERIAL AND PLACE INTO CONTAINER FOR LATER DISPOSAL.

Handl

ing and Storage Precautions:PROTECT AGAINST PHYSICAL DAMAGE. STORE IN COOL, DRY AREA, OUT OF DIRECT SUNLIGHT. SEPERATE FROM COMBUSTIBLES, ORGANICS OR OXIDIZING MATERIALS.

Other Precautions:STORE ABOVE 20F TO PREVENT FREEZING BUT AVOID HEATING ABOVE ATMOSPHERIC TEMPERATURES AS VAPOR PRESSURE INCREASE COULD RUPTURE CONTAINER.

======= Exposure Controls/Personal Protection ==========

Respiratory Protection: THE SPECIFIC RESPIRATOR SELECTED MUST BE BASED ON THE CONTAMI

NATION LEVELS FOUND IN THE WORK PLACE, MUST NOT

EXCEED THE WORKING LIMITS OF THE RESPIRATOR AND BE JOINTLY APPROVED BY NIOSH/MSHA.

Ventilation: PROVIDE LOCAL EXHAUST OR PROCESS ENCLOSURE VENTILATION TO MEET THE PUBLISHED EXPOSURE LIMITS.

Protective Gloves:WEAR APPROPIATE PROTECTIVE GLOVES.

Eye Protection: SPLASH-PROOF OR DUST-RESISTANT GOGGLES.

Other Protective Equipment: EMPLOYEES MUST WEAR APPROPIATE PROTECTIVE (IMPERVIOUS) CLOTHING AND EQUIPMENT TO PREVENT SKIN CONTACT WITH S

UBSTANCE.

Work Hygienic Practices: EMPLOYER SHOULD PROVIDE EYE WASH STATION & SAFETY SHOWER WITHIN THE IMMEDIATE WORK AREA FOR EMERGENCY USE. Supplemental Safety and Health

FOR FIRE FIGHTERS AND OTHER IMMEDIATELY DANGEROUS TO LIFE OR HEALTH CONDITIONS: USE A SELF CONTAINED BREATHING APPARATUS WITH FULL FACEPIECE OPERATED IN PRESSURE DEMAND OR OTHER POSITIVE PRESSURE MODE.

HCC:D2 Boiling Pt:B.P. Text:138F,59C M elt/Freeze Pt:M.P/F.P Text:19.0F,-7.2C Vapor Pres:175 MMHG Vapor Density:5.5 Spec Gravity:3.11 Solubility in Water:3.5% Appearance and Odor:HEAVY RED-BROWN LIQUID WITH PUNGENT ODOR.

Stability Indicator/Materials to Avoid:YES

AL POWDER, FLUORINE, ACETYLENE, ANTIMONY, COPPER HYDRIDE, METAL, OZONE, SILANE, DIETHYL ETHER, CALCIUM NITRIDE, METHANOL Stability Condition to Avoid:MAY BURN BUT DOES NOT IGNITE READILY. MAY IGNIT E COMBUSTIBLES (WOOD, PAPER, OIL, ETC.)

Hazardous Decomposition Products:BROMINE UNDERGOES VIOLENT POLYMERIZATION IN REACTION WITH ACRYLONITRILE.

Waste Disposal Methods:DISPOSAL MUST BE MADE IN ACCORDANCE WITH STANDARD APPLICABLE TO GENERATORS OF HAZARDOUS WASTE, 40 CFR 262.

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