

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

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  
SCIENTIFIC CO  
Address:2000 PARK LN  
Box:City:PITTSBURGH  
State:PA  
ZIP:15275  
Country:US  
Phone:412-490-8586  
CAGE:22527

===== Composition/Information on Ingredients =====

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

===== Hazards Identification =====

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

lution: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

COMPOUND 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 E

xposure:NONE SPECIFIED BY MANUFACTURER.

===== First Aid Measures =====

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.

===== Fire Fighting Measures =====

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 Haza

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

===== Accidental Release Measures =====

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.

===== Handling and Storage =====

Hand  
ling 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 CONTAM  
INATION 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 APPROPRIATE PROTECTIVE GLOVES.

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

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

SUBSTANCE.

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 .

===== Physical/Chemical Properties =====

HCC:D2

Boiling Pt:B.P. Text:138F,59C

Melt/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 and Reactivity Data =====

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  
IGNI

TE COMBUSTIBLES (WOOD, PAPER, OIL, ETC.)

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

===== Disposal Considerations =====

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

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