

FISHER SCIENTIFIC -- BISMUTH, B-319 -- 6810-00-973-8893

===== Product Identification =====

Product ID:BISMUTH, B-319

MSDS Date:06/04/1992

FSC:6810

NIIN:00-973-8893

MSDS Number: CDVNM

=== Responsible Party ===

Company Name:FISHER SCIENTIFIC

Address:1 REAGENT LANE

City:FAIR LAWN

State:NJ

ZIP:07410

Country:US

Info Phone Num:201-796-7100

Emergency Phone Num:201-796-7100;800-424-9300(CHEMTREC)

CAGE:1B4

64

=== Contractor Identification ===

Company Name:FISHER SCIENTIFIC CO. CHEMICAL MFG DIV

Address:1 REAGENT LANE

Box:City:FAIRLAWN

State:NJ

ZIP:07410-2802

Country:US

Phone:201-796-7100

CAGE:1B464

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

Ingred Name:BISMUTH

CAS:7440-69-9

RTECS #:EB2600000

Fraction by Wt: 100%

OSHA PEL:N/K

ACGIH TLV:N/K

Ingred Name:SUPDAT:HOLDER/MONITOR NOZZ; IF THIS IS IMPOSSIBLE, WITHDRAW  
FROM AREA & LET FIRE BURN (1990 EMER REPOSE (ING 3)

R

TECS #:9999999ZZ

Ingred Name:ING 2:GUIDEBOOK, DOT P 5800.5, GUIDE PAGE 32).

RTECS #:9999999ZZ

Ingred Name:CNDTNS TO AVOID:IGNITE IN PRESENCE OF MOISTURE.

RTECS #:9999999ZZ

Ingred Name:MATLS TO AVOID:NITRIC ACID, NITROSYLFLUORIDE, OXIDIZERS,  
PERCHLORIC ACID.

RTECS #:9999999ZZ

Ingred Name:EFTS OF OVEREXP:MANIFESTATIONS OF KIDNEY DMG. LIVER DMG  
W/MILD JAUNDICE & CONJUNCTIVAL HEMORRHAGE ARE RARE. (ING 7)

RTECS #:9999999ZZ

Ingred Name:ING 6:REVERSIBLE ENCEPHALOPATHY & OSTEODYSTROPHY HAVE  
BEEN

RPTD FROM BISMUTH SALTS.

RTECS #:9999999ZZ

Ingred Name:FIRST AID PROC:SALINE, OCCASNLY LIFTING UPPER & LOWER LIDS,  
UNTIL NO EVID OF CHEM REMAIN (FOR @ LST 15 MIN). (ING 9)

RTECS #:9999999ZZ

Ingred Name:ING 8:GET MED ATTN IMMED. INGEST:TREAT SYMPTOMATICALLY &  
SUPPORTIVELY. GET MED ATTN IMMED. IF VOMIT OCCURS, (ING 10)

RTECS #:9999999ZZ

Ingred Name:ING 9:KEEP HEAD LOWER THAN HIPS TO PREVENT ASPIRATION.

RTECS #:9999999ZZ

Ingred Name:RESP PROT:ON SPECIFIC OPERATION, MUST NOT EX  
CEED WORKING

LIMITS OF RESP & MUST BE APPRVD BY NATL INSTITUTE (ING 12)

RTECS #:9999999ZZ

Ingred Name:ING 11:FOR OCCUPATIONAL SAFETY & HEALTH (NIOSH APPRVD). ANY  
DUST, MIST, & FUME RESPIRATOR. ANY CHEMICAL (ING 13)

RTECS #:9999999ZZ

Ingred Name:ING 12:CARTRIDGE RESP W/DUST, MIST, & FUME FILTER. ANY  
POWERED AIR-PURIFYING RESP W/DUST, MIST & FUME FILTER. (ING 14)

RTECS #:9999999ZZ

Ingred Name:ING 13:ANY TYPE "C" SUPPLIED-AIR RESP W/FULL FACEPIECE  
OPERATED IN PRESS-DEMAND/OTHER P

OS PRESS MODE OR W/FULL (ING 15)  
RTECS #:9999999ZZ

Ingred Name:ING 14:FACEPIECE, HELMET/HOOD OPERATED IN CONTINUOUS-FLOW  
MODE. ANY SCBA W/FULL FACE PIECE OPERATED IN PRESS- (ING 16)  
RTECS #:9999999ZZ

Ingred Name:ING 15:DEMAND/OTHER POS PRESS MODE. FOR FIREFIGHTING &  
OTHER IMMED DANGEROUS TO LIFE/HLTH CNDTNS:ANY SCBA THAT (ING 17)  
RTECS #:9999999ZZ

Ingred Name:ING 16:HAS FULL FACEPIECE & IS OPERATED IN  
PRESS-DEMAND/OTHER POS-PRESS MODE. ANY SUPPLIED-AIR RESP THAT HAS  
(ING 18)

R  
TECS #:9999999ZZ

Ingred Name:ING 17:FULL FACEPIECE & IS OPERATED IN PRESS-DEMAND/OTHER  
POS-PRESS MODE IN COMBINATION W/AUXILIARY SCBA (ING 19)  
RTECS #:9999999ZZ

Ingred Name:ING 18:OPERATED IN PRESSURE-DEMAND OR OTHER  
POSITIVE-PRESSURE MODE.  
RTECS #:9999999ZZ

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

LD50 LC50 Mixture:LD50:(ORAL,RAT) 5 GM/KG  
Routes of Entry: Inhalation:YES Skin:YES Ingestion:YES  
Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO

Health H

azards Acute and Chronic:ACUTE:INHAL:BISMUTH CMPDS HAVE  
LITTLE/NO EFT ON INTACT MUC MEMB. SKIN:BISMUTH CMPDS HAVE LITTLE/NO  
EFT ON INTACT SKIN. EYE:DIRECT CONT W/BISMUTH CMPDS IS NOT EXPECTED  
TO CAUSE INJURY EXCEPT IN CASE OF STRONGLY ACIDIC SALTS.  
CHRONIC:INGEST:RPTD/PRLNGD INGEST OF SOLUBLE BISMUTH COMPOUNDS MAY  
CAUSE DECR (EFTS OF OVEREXP)

Explanation of Carcinogenicity:NOT RELEVANT.

Effects of Overexposure:HLTH HAZ:APPETITE, COLIC, NAUS, VOMIT, DIARR,  
ULCERATIVE STOM

ATITIS, FOUL BREATH, SALIVATION, GINGIVITIS, A  
BLUE-GRAY BISMUTH LINE ON THE GUMS OR DIFFUSE/PATCHING BLuish COLOR  
OF MUCOSA, WEAK, RHEUMAT IC PAIN, FEVER, HDCH, & SKIN  
RASHES/LESIONS FOLLOWED BY EXFOLIATIVE DERM. NEPHRITIS & DIURESIS  
MAY BE (ING 6)

Medical Cond Aggravated by Exposure:NONE SPECIFIED BY MANUFACTURER.

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

First Aid:INHAL:REMOVE FROM EXPOS AREA TO FRESH AIR IMMED. IF BRTHG HAS  
STOPPED, PERFORM AR  
TF RESP. KEEP PERSON WARM & @ REST. TREAT  
SYMPTOMATICALLY & SUPPORTIVELY. GET MED ATTN IMMED. SKIN:REMOVE  
CONTAMD CLTHG & SHOES IMMED. WASH AFFECTED AREA W/SOAP OR MILD  
DETERGENT & LG AMTS OF WATER UNTIL NO EVID OF CHEM REMAINS (APPROX  
15-20 MINS). GET MED ATTN IMMED. EYE:WASH IMMED W/LG AMTS OF  
WATER/NORM (ING 8)

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

Extinguishing Media:EXTING USING AGENT FOR TYPE OF FIRE. AVOID BRTHG  
FUMES FROM BURNING

MATL. DRY CHEM, CO\*2, WATER  
SPRAY/ALCOHOL-(SUPDAT)

Fire Fighting Procedures:NIOSH APPRVD SCBA & FULL PROT EQUIP . MOVE  
CNTNR FROM FIRE AREA IF CAN BE DONE W/OUT RISK. APPLY COOLING WATER  
TO SIDES OF CNTNRS THAT ARE EXPOS (SUPDAT)

Unusual Fire/Explosion Hazard:NEGLIGIBLE FIRE HAZARD IN BULK FORM;  
HOWEVER, DUST, POWDER, OR FUMES ARE FLAMMABLE OR EXPLOSIVE WHEN  
EXPOSED TO HEAT OR FLAMES.

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

Spill Release Procedur

es:OCCUP SPILL:LG SPILL:SWEEP UP W/MIN OF DUSTING  
& PLACE INTO SUITABLE CLEAN, DRY CNTNRS FOR RECLAMATION/LATER DISP.  
RESIDUE SHOULD BE CLEANED UP USING A HIGH-EFFICIENCY PARTICULATE  
FILTER VACUUM.

Neutralizing Agent:NONE SPECIFIED BY MANUFACTURER.

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

Handling and Storage Precautions:STORE AWAY FROM INCOMPATIBLE  
SUBSTANCES.

Other Precautions:AVOID REPEATED OR PROLONGED CONTACT WITH THIS  
SUBSTANCE.

=====

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

Respiratory Protection:FOLLOWING RESPS ARE REC BASED ON INFO FOUND IN PHYSICAL DATA, TOX & HLTH EFTS SECTIONS. THEY ARE RANKED IN ORDER FROM MIN TO MAX RESP PROT. SPECIFIC RESP SELECTED MUST BE BASED ON CONTAM LEVELS FOUND IN WORK PLACE, MUST BE BASED (ING 11)

Ventilation:PROVIDE LOCAL EXHAUST VENTILATION. VENTILATION EQUIPMENT MUST BE EXPLOSION PROOF.

Protective Gloves:IMPERVIOUS GLOVES .

Eye Protection:ANSI APPRVD CHEM WORKERS GOGGLES .

Other Protective Equipment:ANSI APPRVD EYE WASH & DELUGE SHOWER .

Work Hygienic Practices:NONE SPECIFIED BY MANUFACTURER.

Supplemental Safety and Health

EXTING MEDIA:RESIST FOAM. (1990 EMER RESPONSE GUIDEBOOK, DOT P 5800.5).

FOR LARGER FIRES:USE WATER SPRAY, FOG/ALCOHOL-RESIST FOAM (1990 EMER RESPONSE GUIDEBOOK, DOT P 5800.5). FIRE FIGHT PROC:TO FLAME S UNTIL WELL AFTER FIRE IS OUT. STAY AWAY FROM ENDS OF TANKS. FOR MASSIVE FIRE IN CARGO AREA, USE UNMANNED HOSE (ING 2)

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

Boiling Pt:B.P. Text:2840F,1560C

Melt/Freeze Pt:M.P/F.P Text:520F,271C

Vapor Pres:1 @ 1021C

Spec Gravity:9.80

Evaporation Rate & Reference:NOT KNOWN

Solubility in Water:INSOLUBLE

Appearance and Odor:SILVER WHITE OR REDDISH METAL WITH RHOMBIC CRYSTALS. ODORLESS.

===== Stability and Reactivity Data =====

Stability Indicator/Materials to Avoid:YES

ACIDS, ALUMINUM, AMMONIUM NITRATE, BRO

MINE PENTAFLUORIDE, CHLORIC ACID,

CHLORINE (GAS), IDODINE PENTAFLUORIDE, (ING 5)

Stability Condition to Avoid:PVNT DISPERSION OF DUST IN AIR. MAY BE

INGITED BY HEAT, SPKS/FLAMES. MAY BURN RAPIDLY W/FLARE BURNING EFT.

MAY (ING 4)

Hazardous Decomposition Products:THERMAL DECOMPOSITION MAY RELEASE

ACRID SMOKE AND IRRITATING FUMES.

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

Waste Disposal Methods:OBSERVE ALL FEDERAL, STATE & LOCAL REGS WHEN STORING/DISP

OSING OF THIS SUBSTANCE. FOR ASSISTANCE, CONT DISTRICT  
DIRECTOR OF THE ENVIRONMENTAL PROTECTION AGENCY.

Disclaimer (provided with this information by the compiling agencies):  
This information is formulated for use by elements of the Department  
of Defense. The United States of America in no manner whatsoever,  
expressly or implied, warrants this information to be accurate and  
disclaims all liability for its use. Any person utilizing this  
document should seek competent professional adv  
ice to verify and  
assume responsibility for the suitability of this information to their  
particular situation.