

MALLINCKRODT INC.,SCIENCE PRODUCTS DIVISION -- BROMINE, CAT #0441 -- 6810-00-236-5341  
===== Product Identification =====

Product ID:BROMINE, CAT #0441  
MSDS Date:01/01/1987  
FSC:6810  
NIIN:00-236-5341  
MSDS Number: BDLSX  
=== Responsible Party ===  
Company Name:MALLINCKRODT INC.,SCIENCE PRODUCTS DIVISION  
Address:PARIS BYPASS  
Box:M  
City:PARIS  
State:KY  
ZIP:40361  
Country:US  
Info Phone Num:314-982-5000  
Emer  
gency Phone Num:314-982-5000  
CAGE:62910  
=== Contractor Identification ===  
Company Name:MALLINCKRODT SPECIALTY CHEMICALS CO  
Address:222 RED SCHOOL LANE  
Box:City:PHILLIPSBURG  
State:NJ  
ZIP:08865  
Country:US  
Phone:908-859-2151  
CAGE:62910

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

Ingred Name:BROMINE (SARA III)  
CAS:7726-95-6  
RTECS #:EF9100000  
Fraction by Wt: >98%  
OSHA PEL:0.1PPM/0.3 STEL  
ACGIH TLV:O.1PPM/0.3 STEL;9192

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

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Effects of Overexposure:INH:LIQ/VAP CORR TO BODY  
TISSUES;ING:CORR/VOMITG,SORE THROAT;SKIN/EYES:CORR.CAUSES  
PAIN,BLRRD VISION

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First Aid Measures

First Aid:INHAL:RMV TO FRESH AIR.IF NEEDED,GIVE CPR/OXYGEN.GET  
MD;INGEST:GIVE SEVRL GL OF WATER.DO NOT INDUCE VOMITG.IMMED GET  
MD;SKIN:FLUSH W/LG QTY OF H\*2O FOR 15 MIN.REMV CONTMNTD CLOTHES GET  
MD;EYES:IMMED F LUSH W/PLENTY OF H\*2O FOR AT LEAST 15 MIN.GET MD.

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Fire Fighting Measures

Flash Point:NONE  
Extinguishing Media:EXTINGUISH W. AGENT SUITABLE FOR SURROUNDING FIRE.  
Fire Fighting Procedures:WEAR SELF-CNTD BRTHG,APP H\*2O SPRAY TO COOL  
CONTR.  
Unusual Fire/Explosion Hazard:NOT CONSDRD AS EXPLSN HAZARD;FUMES ARE  
EMITD WHEN HEATD.VAP CAN FLOW ALONG SURFCS TO LYING AREAS.

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Accidental Release Measures

Spill Release Procedures:ESTABLSH PLAN/TRNG FOR EMERGY.KEEP  
UP  
WIND.VENT/EVAC AREA.USE PROTCTV CLOTHG/RESP EQUIP.CONTAIN/RECUR  
SPILLS IF POSS.NEUTRLZ SM SPILLS W/NA\*2S\*2O\*3 SOLN.DIKE LG SPILL  
W/SAND.SPRAY WATER TO 1 INCH.CAREF ULLY,NEUTRLZ VAP IN AIR W/ANHYD  
NH\*3(SEEDISPOSL)\*

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Handling and Storage

Handling and Storage Precautions:KEEP IN TIGHTLY CLOSED CONTNRS AT  
COOL,DRY,VENTILATED PLACE.PROTECT AGAINST PHY DAMAGE.KEEP ABOVE 20F  
TO AVOID FREEZING BUT AVOID HEATG ABOVE ATM TEMP

Other Precau  
tions:AVOID BREATHING MIST.USE W/ADEQUATE VENTILATION.KEEP  
CONTAINRS CLOSED.WASH THOROUGHLY AFTER HANDLING.AVOID SKIN,EYES &  
CLOTHING CONTACT.\*\*NOTE:ALLOW ONLY QUALIFIED PERSONS TO WORK  
W/BROMINE.

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Exposure Controls/Personal Protection

Respiratory Protection:SUPPLIED AIR RESPIR/SCBA; ESCAPE: GAS MASK  
Ventilation:LOCAL EXHAUST TO MAINTN BELOW TLV.  
Protective Gloves:IMPERVIOUS  
Eye Protection:GOGGLES/FACE SHIELD  
Other Protective Equipment:FULL PROTECTIVE C

LOTHING,SAFETY SHOWER,EYE

WASH STATION

Supplemental Safety and Health

MSDS FROM MFR DATED:1 AUG 85 CONFORMS TO OSHA HAZ COMM STD;REACTS  
W/WATER OR STEAM TO PRODUCE FUMES OF HYPOBROMOUSACID & HYDROGEN  
BROMIDE;

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

HCC:C1

Boiling Pt:=57.8C, 136.F

B.P. Text:58C(136F)

Vapor Pres:175

Vapor Density:5.5

Spec Gravity:3.1

Solubility in Water:MODERATE

Appearance and Odor:DARK,REDDISH-BROWN FUMING LIQUID W/PUNGENT ODOR

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

Stability Indicator/Materials to Avoid:YES

WATER,REDUCING AGENTS,FLAMM MATL,HG,TI,& AL.

Hazardous Decomposition Products:EMITS FUMES OF BROMINE & BROMIDES UPON  
THRML DECOMPOSITION.

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

Waste Disposal Methods:\*NEUTRLZ LIQ BROMINE W/SOLNS OF POT

CARBONATE,SOD CARBONATE OR SOD BICARBONATE.COLLECT OR FLUSH TO SUMP  
FOR DISPOSAL; DISPOSAL:NEUTRALIZED WASTE MAY BE C

ONTNRZD & DISPOSD

IN AN APPRVD WASTE DISPOSAL F ACILITY I/AW LOC,ST,FED REGS;SALVAGE  
BROMIN WASTE

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