

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 =====

=====

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

===== 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.

=====

===== 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.

===== 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)*

===== 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.

===== 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

=====

===== 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

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 advi

ce to verify and
assume responsibility for the suitability of this information to their
particular situation.