

Material Safety Data Sheet



PROTECTOR/DEFENDER

SECTION I - IDENTIFICATION

MANUFACTURER'S NAMEHaviland Products Company
MANUFACTURER'S ADDRESS421 Ann St., NW, Grand Rapids, MI 49504
PHONE NUMBER..... (616) 361-6691
EMERGENCY PHONE NUMBERCHEMTREC (800) 424-9300
EFFECTIVE DATE.....7/16/04
TRADE NAME.....**PROTECTOR/DEFENDER**
CHEMICAL FAMILY.....Metal Bromide

SECTION II - HAZARDOUS INGREDIENTS

HAZARDOUS INGREDIENTS	OSHA PEL	TLV (Units)	CAS NUMBER
Sodium Bromide	Not Established	10mg/m ³	7647-15-6

SECTION III - PHYSICAL DATA

BOILING POINT 2534oF
FREEZING POINT 1391oF
VAPOUR PRESSURE Not Applicable
VAPOUR DENSITY (air=1) Not Applicable
SOLUBILITY IN H₂O..... Soluble
ODOUR AND APPEARANCE Clear blue liquid; Odorless
SPECIFIC GRAVITY 1.33
pH..... 5.5 - 8.0 (5% solution)

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASHPOINT AND METHOD OF DETERMINATION Will Not Burn
LOWER EXPLOSIVE LIMIT (% by Volume) Not Applicable
UPPER EXPLOSIVE LIMIT (% by Volume) Not Applicable
MEANS OF EXTINCTION.....As for Surrounding Fires
SPECIAL FIRE FIGHTING PROCEDURES.....Use self contained breathing apparatus in confined areas.
UNUSUAL FIRE HAZARD.....None Currently Known

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SECTION V - HEALTH HAZARD DATA

CARCINOGENICITY, REPRODUCTIVE EFFECTS None
NTP? No
IARC MONOGRAPHS? No
OVER EXPOSURE EFFECTS Possible Irritation of eyes and skin.
PRIMARY ROUTE (S) OF ENTRY Inhalation
SPECIFIC FIRST AID PROCEDURES In case of eye contact: Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention. Ingestion: Give two glasses of water. Do not induce vomiting. Get medical attention. Never give anything by mouth to unconscious person. For Skin: Wash contaminated areas with soap and water. If inhaled: Remove to fresh air.
EXPOSURE AGGRAVATED MEDICAL CONDITIONS None Currently Known

SECTION VI - REACTIVITY DATA

CHEMICAL STABILITY Stable
CONDITIONS TO AVOID Product is hygroscopic - avoid contact with water and moist air.
INCOMPATIBLE MATERIALS Strong acids, bases, oxidizing agents, alkaloids, and heavy metal salts.
HAZARDOUS DECOMPOSITION PRODUCTS If strongly overheated, may release bromine.
HAZARDOUS POLYMERIZATION Will Not Occur
POLYMERIZATION AVOID Not Applicable

SECTION VII - SPILL OR LEAK PROCEDURE

LEAK AND SPILL PROCEDURES Sweep or shovel spills into appropriate container for disposal.
WASTE DISPOSAL Waste solid and solutions resulting from flushing spills should be disposed of at an approved waste disposal facility according to local, state and federal laws and regulations.

SECTION VIII - SPECIAL PROTECTION

RESPIRATORY PROTECTION None required under normal use.
VENTILATION None required under normal use.
PROTECTIVE GLOVES Rubber or plastic.
EYE PROTECTION Splash proof chemical goggles.
OTHER PROTECTIVE EQUIPMENT A safety shower and eye bath should be available.
HANDLING PROCEDURES AND EQUIPMENT Store in well-ventilated cool, dry area. Keep container closed when not in use.

SECTION IX - SPECIAL PRECAUTIONS

HAZARD CLASS None
DOT SHIPPING NAME NON-REGULATED
UN NUMBER NR
REPORTABLE QUANTITY (RQ) Not Listed

REFERENCES

ZZ2PRODE
HMIS H-1 F-0 R-0
EPA REG. # 57787-24