

PROTECTION R.T. INC.

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MATERIAL SAFETY DATA SHEET

DATE REVISED: JAN 2021

PRODUCT IDENTIFICATION:

PRODUCT NAME: HALONAIRE
INGREDIENTS: HALON 1211 & HALON 1301
CHEMICAL NAMES: BROMOCHLORDIFLUORMETHANE & BROMOTRIFLUOROMETHANE
SYNONYMS: NOT APPLICABLE
CHEMICAL FAMILY: HALOGENATED HYDROCARBONS
MOLECULAR FORMULA: NOT APPLICABLE
PRODUCT USES: EXTINGUISHING AGENTS

HAZARDOUS INGREDIENTS OF MATERIAL:

HAZARDOUS INGREDIENTS

HALON 1211 ACGIH TLV
HALON 1301 BOTH NOT LISTED

PHYSICAL PROPERTIES:

PHYSICAL STATE: GAS
APPEARANCE & ODOR: COLORLESS GAS WITH A VERY FAINT SWEET ODOR
ODOR THRESHOLD: NOT AVAILABLE
BOILING POINT C: MINUS 50
MELTING POINT: NO DATA
FREEZING POINT: NO DATA
SPECIFIC GRAVITY: 1.73
VAPOR DENSITY: 5.3 (AIR=1.00)
EVAPORATION RATE: 100% VOLATILE
SOLUBILITY: NOT SOLUBLE IN WATER

REACTIVITY DATA:

STABILITY:

UNDER NORMAL CONDITIONS: STABLE
UNDER FIRE CONDITIONS: DECOMPOSES ABOVE 900F
HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

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REACTIVITY DATA CONT'D:

CONDITIONS TO AVOID: AVOID EXCESSIVE AMOUNTS OF HEAT

MATERIALS TO AVOID: - FUELS THAT CONTAIN THEIR OWN OXIDIZING AGENTS SUCH AS GUN POWDER, PROPELLANTS, CELLULOSE NITRATE, ORGANIC PEROXIDES, ETC.
-REACTIVE METALS SUCH AS SODIUM, POTASSIUM, MAGNESIUM, TITANIUM, ETC.
-METAL HYDRIDES SUCH AS LITHIUM HYDRIDE.
-CHEMICALS CAPABLE OF AUTO-THERNAL DECOMPOSITION SUCH

AS.

ORGANIC PEROXIDES AND HYDRAZINE.

HAZORDOUS DECOMPOSITION OR COMBUSTION PRODUCTS: HALONAIRE BEGINS DECOMPOSING AT TEMPERATURES ABOVE 900F (482C) TO GIVE FREE HALOGENS, HALOGEN ACIDS AND MINUTE QUANTITIES OF CARBONYL HALIDES.

SENSITIVITY TO STATIC CHARGE: NOT AVAILABLE

EXPLOSIVE POWER: NOT AVAILABLE

SENSITIVITY TO MECHANICAL IMPACT: NOT AVAILABLE

RATE OF BURNING: NOT AVAILABLE

SHIPPING DATA: (UNDER THE TDG ACT)

SHIPING NAME: BROMOCHLORODIFLUOROMETHANE & BROMOTRIFLUOROMETHANE

PRODUCT NAME: HALONAIRE (HALON 1211 AND HALON 1301)

SHIPPING CLASS/DIVISION: 60 & 2.2

PRODUCT IDENTIFICATION NO: UN 1044

CANUTEC 24 HR EMERGENCY NO. 613-996-6666

FIRE AND EXPLOSIVE DATA:

FLASH POINT: DOES NOT FLASH

AUTO-IGNITION TEMP NOT APPLICABLE

FLAMMABILITY LIMITS IN AIR (%UEL &LEL): NOT APPLICABLE

FIRE EXTINGUISHING MEDIA: NOT APPLICABLE

FIRE FIGHTING PROCEDURES: USE WATER SPRAY TO COOL FIRE-EXPOSED CONTAINERS OR STRUCTURES. USE WATER SPRAY TO DISPERSE VAPORS; RE-IGNITION IS POSSIBLE. USE SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING.

OTHER FIRE OR EXPLOSIVE

HAZARDS: WEAR SELF-CONTAINED BREATHING APPARATUS WITH FULL FACE PIECE AND PROTECTIVE CLOTHING WHEN RE-ENTERING UNVENTILATED AREAS WHERE HALONAIRE HAS BEEN USED.

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FIRE AND EXPLOSIVE DATA (CONT'D):

OTHER PERSONAL PROTECTIVE EQUIPMENT: IMPERVIOUS APRON AND BOOTS. SAFETY AND EYE BATH LOCATED CLOSE TO CHEMICAL EXPOSURE AREA.

HANDLING PROCEDURES AND EQUIPMENT: NOT APPLICABLE.

STORAGE TEMPERATURE AND REQUIREMENTS: STORE IN AREAS UNDER 120F(49C) AND OVER -40F(-40C). KEEP AWAY FROM HEAT, SPARKS AND FLAMES (i.e. CONTAINERS).

OTHER PRECAUTIONS: AFTER USED TO EXTINGUISH FIRE, VENTILATE AREA TO DISSIPATE COMBUSTION PRODUCTS. AVOID BREATHING VAPORS. AVOID CONTACT WITH EYES OR SKIN. WASH THROUGHLY WITH SOAP AND WATER AFTER HANDLING.

TOXICOLOGICAL AND HEALTH DATA:

RECOMMENDED EXPOSURE LIMIT: NO TLV ASSIGNED BY ACGIH. OUR RECOMMENDATION FOR OPERATING PERSONNEL IS THAT EMPLOYEE EXPOSURE SHOULD BE KEPT UNDER 3000PPM AS AN (8) HOUR TWA.

CARCINOGENICITY DATA: THE INGREDIENTS OF THIS PRODUCT ARE NOT LISTED AS CARCINOGENS BY NTP (NATIONAL TOXICOLOGY PROGRAM) AND NOT REGULATED BY OSHA (OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION) AND HAVE NOT BEEN EVALUATED BY IARC (INTERNATIONAL AGENCY FOR RESEARCH ON CANCER) OR ACGIH (AMERICAN

CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGENISTS).

REPRODUCTIVE EFFECTS: NO INFORMATION IS AVAILABLE AND NO ADVERSE REPRODUCTIVE EFFECTS ARE ANTICIPATED.

MUTAGENICITY DATA: NO ADVERSE MUTAGENIC EFFECTS ARE ANTICIPATED.

TERATOGENIC DATA: NO INFORMATION IS AVAILABLE AND NO ADVERSE EFFECTS ARE ANTICIPATED.

SYNERGISTIC MATERIALS: NONE KNOWN.

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TOXICOLOGICAL AND HEALTH DATA (CONT'D)

EFFECTS OF EXPOSURE WHEN:

-INHALED: EXPOSURE TO CONCENTRATIONS ABOVE 5% FOR LONGER THAN ONE MINUTE MAY CAUSE TOXIC SIDE EFFECTS.

-IN CONTACT WITH SKIN: EVAPORATION OF LIQUID FROM THE SKIN WILL PRODUCE A CHILLING SENSATION. SKIN INJURY DOES NOT RESULT.

SYSTEMATIC

TOXIC CONCENTRATIONS ARE UNLIKELY TO BE ABSORBED

THROUGH

THE SKIN IN HUMANS.

-IN CONTACT WITH EYES: THE LIQUID FORM OF THIS MATERIAL CAN PRODUCE A CHILLING SENSATION AND DISCOMFORT.

-INGESTED:

INGESTION IS NOT POSSIBLE SINCE THE MATERIAL IS A GAS AT ROOM TEMPERATURE.

OTHER HEALTH EFFECTS:

PROLONGED EXPOSURES AT HIGHER THAN 5% CONCENTRATIONS MAY CAUSE DIZZINESS, HEADACHE, NAUSEA, IMPAIRED COORDINATION

AND

CARDIAC SENSITISATION. THIS IS HOWEVER EXTREMELY UNLIKELY AS IT IS NOT POSSIBLE TO ACHIEVE CONC'NS OF 5% FOR EXTENDED PERIODS WITH PORTABLE HALONAIRE UNITS.

FIRST AID PROCEDURES WHEN:

-INHALED: REMOVE VICTIM TO FRESH AIR. IF COUGH OR OTHER RESPIRATORY SYMPTOMS DEVELOP, CONSULT MEDICAL PERSONNEL.

-IN CONTACT WITH SKIN: WASH MATERIAL FROM THE SKIN WITH COPIOUS AMOUNTS OF SOAP AND WATER. IF REDNESS, ITCHING OR A BURNING SENSATION DEVELOPS, CONSULT A DOCTOR.

-IN CONTACT WITH EYES: FLUSH IMMEDIATELY WITH COPIOUS AMOUNTS OF WATER FOR AT LEAST 15 MINUTES. IF REDNESS, ITCHING OR A BURNING SENSATION DEVELOPS, HAVE EYES EXAMINED AND TREATED BY MEDICAL PERSONNEL.

-INGESTED: GIVE 1 OR 2 GLASSES OF WARM WATER. GET MEDICAL ATTENTION. THIS SITUATION IS EXTREMELY UNLIKELY SINCE HALONAIRE IS A GAS AT ROOM TEMPERATURE.

EMERGENCY MEDICAL CARE: IN THE UNLIKELY EVENT THAT THE PERSON HAS BREATHED HIGH CONC'NS OF HALONAIRE, DO NOT GIVE ADRENALIN OR SIMILAR SYMATHOMIMETIC DRUGS. DO NOT ALLOW VICTIM TO EXERCISE UNTIL 24 HOURS FOLLOWING HIGH EXPOSURE.

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FIRST AID PROCEDURES WHEN (CONT'D):

FREEZE BURNS OF MUCOSAL TISSUE CAN DEVELOP FOLLOWING CONTACT WITH LIQUID HALONAIRE.

ADDITIONAL SOURCES:

1. **NFPA 12A (NATIONAL FIRE PROTECTION ASSOCIATION STANDARD HALON 1301)**
 2. **NFPA 12B (DITTO FOR HALON 1211 SYSTEMS)**
 3. **NATIONAL FIRE PROTECTION HANDBOOK**
 4. **PATTY'S INDUSTRIAL HYGIENE AND TOXICOLOGY, VOL. 11 A.B.C.
CLAYTON, G.D. AND GLAYTON, F.E. ed., JOHN WILEY & SONS, NEW YORK 3RD ed. 1981.**
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**THE INFORMATION CONTAINED HEREIN IS OFFERED AS A GUIDE TO THE HANDLING OF PROTECTION R.T.'S HALONAIRE PRODUCT AND HAS BEEN PREPARED IN GOOD FAITH BY TECHNICALLY KNOWLEDGEABLE PERSONNEL.
IT IS NOT INTENDED TO BE ALL INCLUSIVE.**

PREPARED BY:

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THIS MATERIAL SAFETY SHEET IS VALID FOR THREE YEARS.