

MSDS

Material Safety Datasheets



1. Identification

Product Name: TRIODIDE
Synonyms: Iodotrifluorormetane, Trifluoroiodomethane
CAS Number: 2314-97-8
EINECS: 219-014-5
ASG Product Codes: 1120
Product Use: Iodotrifluoromethane, is a fire extinguishing agent.
Manufacturer/Supplier: AJAY NORTH AMERICA L.L.C.
Address: 1400 Industry Road
 Powder Springs, GA, USA
General Information Number: + 1 770 943 6202
Transportation Emergency Number: CHEMTREC 800-424-9300

2. Hazards Identification

GHS Classification:

Health	Environmental	Physical
Eye Irritation - Category 2B Skin Irritation - Category 3		Liquefied Gas

GHS Label:

GHS Label Pictogram(s): Exclamation mark	
TDG / USDOT Transportation Pictogram(s): Liquefied gas (Class 2.2)	
Signal Word: Warning	
Hazard Statements: Contains gas under pressure May explode if heated	Precautionary Statements: Keep container tightly closed.. Keep away from heat and oxidizers Use only in a well-ventilated area Wear respiratory protection, protective gloves and eye/face protection. Do not eat, drink or use tobacco when using this product. Wash thoroughly after handling.

3. Composition / Information on Ingredients

Component	CAS Number	Weight %
Iodotrifluoromethane	2314-97-8	98 %

4. First Aid Measures

Eye: Immediately wash eyes (occasionally lifting upper and lower eyelids until no evidence of chemical remains) and skin with plenty of lukewarm, not hot, water for at least 15 minutes. Contact a physician.

Skin: Immediately wash area with large amounts of lukewarm, not hot, water. If persistent redness, itching or burning sensation exists, seek medical attention.

Inhalation: Remove immediately to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. Maintain airway and blood pressure. If breathing is difficult, give oxygen. Keep affected person calm. Call a physician. Administration of epinephrine (adrenaline) is contraindicated in the treatment of overexposure to iodotrifluoromethane.

5. Fire Fighting Measures

Suitable Extinguishing Media: Iodotrifluoromethane, is a fire extinguishing agent. Use water to cool fire-exposed cylinders as they might rupture when exposed to heat.

Fire Fighting Procedures: Wear full protective equipment including self contained breathing apparatus (eye, body, respiratory).

Unusual Fire and Explosion Hazards: When iodotrifluoromethane is discharged onto a fire, it decomposes above 575 °F (300 °C), releasing hydrogen fluoride, hydrogen iodide, iodine, and small amounts of carbonyl fluoride, and carbonyl iodide. These decomposition products, although harmful if inhaled, are easily detected; only a few parts per million in air cause an unpleasant, acrid odor which acts as a warning to personnel.

6. Accidental Release Measures

Steps to be Taken if Material is Spilled or Released:

Evacuate area, and provide maximum ventilation. Wear protective gear when turning off gas source. Unprotected persons should move up wind of spill. Before re-entry, ventilate area, especially low or enclosed places where heavy vapors might collect.

For disposal of residues refer to Section 13.

7. Handling and Storage

Handling: Keep tightly closed. Wear eye, skin and respiratory protection when handling.

Storage: Store cylinders in cool place. Avoid cylinder damage. Limit exposure to vapors. Do not store in open, unlabeled or mislabeled containers. Wear fresh clothing daily. Limit exposure to vapors.

8. Exposure Controls / Personal Protection

Engineering Controls: Eyewash and shower should be in the immediate area if the possible of exposure to skin or eyes exists.. General exhaust so as to give fresh air flow through use area.

Personal Protective Equipment:

Eye Protection: Chemical splash goggles when handling liquid.

Skin Protection: Avoid skin contact. Impervious rubber gloves.

Respiratory Protection: Wear OSHA/MSHA approved full or half face pieces (with chemical goggles) respiratory protective equipment for organic vapors. The respirator use limitations made by OSHA/MSHA or the manufacturer must be observed. Respiratory protection programs must meet the requirements of 29CFR 1910.132. For high concentrations, confined areas, and oxygen deficient atmospheres wear air-supplied mask or self-contained breathing apparatus.

OCCUPATIONAL EXPOSURE LIMITS:

OSHA PEL	N/E
ACGIH TLV-TWA	150 ppm

9. Physical and Chemical Properties

Physical state	Liquid
Appearance:	Colorless
Odor:	Odorless
Odor threshold	N/A
pH :	N/A
Melting point:	- 22.5 °C
Boiling point	- 110 °C
Flash point:	N/A
Evaporation rate (Water=1):	N/A
Flammability:	Non flammable
Vapor pressure:	63.70 psi (at 25 °C)
Vapor density (Air=1):	6.9
Specific gravity (Water=1)	N/A
Solubility in water:	Insoluble
Octanol/Water partition coefficient:	N/A
Decomposition temperature:	N/A
Apparent density :	N/A
Molecular formula:	CF ₃ I
Molecular weight:	195.91 g/mol

10. Stability and Reactivity

Stability : Stable

Incompatibility: Active metals, fires of metal hydrides, and materials containing own oxygen.

Hazardous Reactions/Decomposition Products: ill decompose to Iodine, Hydrogen fluoride, and Hydrogen Iodide.

11. Toxicological Information

Route of Exposure: Inhalation, skin contact.

Toxicity Data:

Signs and Symptoms of Overexposure:

Skin Contact: Evaporation of Iodotrifluoromethane on the skin/eye may cause a chilling sensation or even frostbite. Significant skin permeation and subsequent systemic toxicity appears unlikely.

Eye Contact: Burning, irritation.

Inhalation: Based on animal studies, overexposure may cause central nervous system depression such as dizziness, confusion, uncoordination, drowsiness or unconsciousness. In susceptible individuals or possible those with pre-existing cardiovascular system disease, this material may cause heightened sensitivity to circulating epinephrine (adrenaline) compounds resulting in irregular heart beats and sometimes death.

Acute Effects:

Eye Contact: Causes eye irritation and possible redness.

Skin Contact: Skin contact rash and redness

Inhalation: May cause cardiac abnormalities.

Acute Systemic Effects: May be hepatotoxic or neurotoxic. May cause effects on the liver, heart, nervous system and gastrointestinal tract.

Chronic Effects: Prolonged skin contact may cause dermatitis. May affect the central nervous system, bone, and blood.

Medical Conditions Aggravated by Exposure: Preexisting respiratory tract diseases, skin disorders or impaired respiratory function.

Acute Toxicity Values:

Inhalation - rat LC50 (15 minute): 27.4% oral

Canine Cardiac NOAEL (No Observable Adverse Effect Level) = 0.2%

Canine Cardiac LOAEL (Lowest Observable Adverse Effect Level) = 0.4%

Carcinogenicity: Not listed by IARC, OSHA, or ACGIH as a carcinogen.

Mutagenesis: Mutagenicity has not yet been fully evaluated. Initial results were positive in the AMES test (4 of 5 assays) and the mouse micronucleus test; The mouse lymphoma test was negative.

12. Ecological Information

No information available.

13. Disposal Considerations

Waste Classification: Hazardous

Disposal Methods: Dispose in an approved chemical landfill in accordance with any local, state, or federal regulations.

14. Transport Information

U.S. Department of Transportation (DOT):

Proper Shipping Name:	LIQUEFIED GAS, N.O.S. (IODOTRIFLUOROMETHANE), 2.2, UN3163
D.O.T. Label:	Non flammable Gas
Hazard Class:	2.2
UN/NA Number:	UN3163
Packing Group:	I
Placards:	Liquefied gas

Maritime Organization (IMDG)

Proper Shipping Name:	LIQUEFIED GAS, N.O.S. (IODOTRIFLUOROMETHANE), 2.2, UN3163
Hazard Class:	2.2
UN/NA Number:	UN3163
Packing Group:	I
Placards:	Liquefied gas

RID / ADR / IMO / IATA :

Proper Shipping Name:	LIQUEFIED GAS, N.O.S. (IODOTRIFLUOROMETHANE), 2.2, UN3163
Hazard Class:	2.2
UN/NA Number:	UN3163
Packing Group:	I
Placards:	Liquefied gas

15. Regulatory Information

U.S. Federal Regulations

Comprehensive Environmental Response and Liability Act of 1980 (CERCLA):

Iodotrifluoromethane (CAS No. 2314-97-8: Not listed for CERCLA Sec. 103, 100 pounds: Comprehensive Environmental Response, Compensation and Liability Act (Superfund). Releases to air, land or water of these hazardous substances which exceed the Reportable Quantity (RQ) must be reported to the National Response Center, (800-424-8802); Listed at 40 CFR 302.4.

Toxic Substances Control Act (TSCA):

Iodotrifluoromethane (CAS No. 2314-97-8: Listed for TSCA, Flag None. TSCA: Toxic Substances Control Act. Requirement to submit a premanufacturing notice before commencing to manufacture or import a new substance.

Resource Conservation and Reclamation Act (RCRA)

Iodotrifluoromethane (CAS No. 2314-97-8: Not Listed for RCRA: Resource Conservation and Reclamation Act. Commercial chemical product wastes designated as acute hazards and toxic under 40 CFR 261.33.

Clean Water Act (CWA):

Iodotrifluoromethane (CAS No. 2314-97-8: Not listed for CWA. Clean Water Act for Hazardous Substances which requires reporting for releases. This product is not listed as a Priority Pollutant under CWA.

Superfund Amendments and Reauthorization Act (SARA) Title III Information:

SARA 302 EHS RQ : Iodotrifluoromethane (CAS No. 2314-97-8: Not listed for SARA Section 302 EHS RQ 100 pounds: Reportable Quantity of Extremely Hazardous Substance, listed at 40 CFR 355.

SARA 302 EHS TPQ : Iodotrifluoromethane (CAS No. 2314-97-8: Not listed for SARA Section 302 EHS TPQ 100/10,000 pounds: Threshold Planning Quantity of Extremely Hazardous Substance. An asterisk (*) following a Threshold Planning Quantity signifies that if the material is a solid and has a particle size equal to or larger than 100 micro-meters, the Threshold Planning Quantity = 10,000 LBS.

SARA Section 313 : Iodotrifluoromethane (CAS No. 2314-97-8: Not listed for SARA Section 313 Chemicals: (Selenium Compounds - SARA 313) Toxic Substances subject to annual release reporting requirements listed at 40 CFR 372.65.

European Inventory of Existing Chemicals (EINECS):

EU Classification: HARMFUL (Xn)

Risk (R) Phrases: R68: Possible risk of irreversible effects

Safety (S) Phrases: S2: Keep out of the reach of children

S36/37: Wear suitable protective clothing and gloves.

16. Other Information

National Fire Protection Association (NFPA) Ratings: This information is intended solely for the use of individuals trained in the NFPA system.

Health: 2
Flammability: 0
Reactivity: 1

General References: HSDB (Hazardous Substances Data Bank)
IRIS (Integrated Risk Information System)
ITER (International Toxicity Estimated for Risk)
CCRIS (Chemical Carcinogenesis Research Information System)
GENE-TOX (Genetic Toxicology)
RTECS Registry of Toxic Effects of Chemical Substances)
EPA (Environmental Protection Agency)
ECB (European Chemicals Bureau)
GHS (Globally Harmonized System of Classification and Labeling of Chemicals)

Revision Indicator: New GHS SDS (Globally Harmonized System of Classification and Labeling of Chemicals)

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