

**Material Safety Data Sheet**

acc. to OSHA and ANSI

Printing date 05/24/2010

Reviewed on 05/21/2010

**1 Identification of substance:****Product details:****Product name:** Trifluoroiodomethane**Stock number:** 39665**Manufacturer/Supplier:**

Alfa Aesar, A Johnson Matthey Company  
 Johnson Matthey Catalog Company, Inc.  
 30 Bond Street  
 Ward Hill, MA 01835-8099  
 Emergency Phone: (978) 521-6300  
 CHEMTREC: (800) 424-9300  
 Web Site: www.alfa.com

**Information Department:** Health, Safety and Environmental Department**Emergency information:**

During normal hours the Health, Safety and Environmental Department. After normal hours call Chemtrec at (800) 424-9300.

**2 Composition/Data on components:****Chemical characterization:****Description: (CAS#)**

Trifluoroiodomethane (CAS# 2314-97-8)

**Identification number(s):****EINECS Number:** 219-014-5**Index number:** 602-086-00-0**3 Hazards identification****Hazard description:**

Xn Harmful

**Information pertaining to particular dangers for man and environment**

R 68 Possible risk of irreversible effects.

**Classification system****HMIS ratings (scale 0-4)****(Hazardous Materials Identification System)**

HEALTH	1
FIRE	0
REACTIVITY	1

Health (acute effects) = 1

Flammability = 0

Reactivity = 1

**GHS label elements**

Warning

2.5/L - Contains gas under pressure; may explode if heated.



Warning

3.5/2 - Suspected of causing genetic defects.

**Prevention:**

Wear protective gloves/clothing.

**Storage:**

Protect from sunlight. Store in a well-ventilated place.

**4 First aid measures****After inhalation**

Supply fresh air. If required, provide artificial respiration. Keep patient warm.  
 Seek immediate medical advice.

**After skin contact**

Immediately wash with water and soap and rinse thoroughly.  
 Seek immediate medical advice.

Rub in calcium gluconate solution or calcium gluconate gel immediately.

**After eye contact**

Rinse opened eye for several minutes under running water. Then consult a doctor.

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**After swallowing** Seek immediate medical advice.**5 Fire fighting measures****Suitable extinguishing agents**

Product is not flammable. Use fire fighting measures that suit the surrounding fire.

**Special hazards caused by the material, its products of combustion or resulting gases:**

In case of fire, the following can be released:

Carbon monoxide and carbon dioxide

Hydrogen fluoride (HF)

Hydrogen iodide (HI)

Iodine (I<sub>2</sub>)**Protective equipment:**

Wear self-contained respirator.

Wear fully protective impervious suit.

**6 Accidental release measures****Person-related safety precautions:**

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

**Measures for environmental protection:**

Do not allow material to be released to the environment without proper governmental permits.

**Measures for cleaning/collecting:**

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

**Additional information:**

See Section 7 for information on safe handling

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

**7 Handling and storage****Handling****Information for safe handling:**

Keep container tightly sealed.

Store in cool, dry place in tightly closed containers.

Ensure good ventilation at the workplace.

**Information about protection against explosions and fires:** The product is not flammable**Storage****Requirements to be met by storerooms and receptacles:**

Store only in unopened original receptacles.

Unsuitable material for container: ceramic, glass

**Information about storage in one common storage facility:**

Do not store together with acids.

Store away from oxidizing agents.

**Further information about storage conditions:**

Keep container tightly sealed.

Store in cool, dry conditions in well sealed containers.

**8 Exposure controls and personal protection****Additional information about design of technical systems:**

Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

**Components with limit values that require monitoring at the workplace:**

Fluorides (as F)	mg/m <sup>3</sup>
ACGIH TLV	2.5
Austria MAK	2.5
Belgium TWA	2.5
Finland TWA	2.5
France TWA	2.5
Germany MAK	2.5
Hungary TWA	1; 2-STEL
Netherlands MAC-K	3.5
Norway TWA	0.6
Poland TWA	1; 3-STEL
Sweden NGV	2
Switzerland MAK-W	1.5; 3-KZG-W
United Kingdom TWA	2.5

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Russia TWA 2  
Denmark TWA 2.5  
USA PEL 2.5

**Additional information:** No data**Personal protective equipment****General protective and hygienic measures**

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Remove all soiled and contaminated clothing immediately.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

**Breathing equipment:** Use suitable respirator when high concentrations are present.**Protection of hands:** Impervious gloves**Eye protection:** Safety glasses**Body protection:** Protective work clothing.**9 Physical and chemical properties:****General Information**

<b>Form:</b>	Compressed gas
<b>Color:</b>	Colorless
<b>Odor:</b>	Not determined

**Change in condition**

<b>Melting point/Melting range:</b>	Not determined
<b>Boiling point/Boiling range:</b>	-22.5°C (-9°F)
<b>Sublimation temperature / start:</b>	Not determined

**Flash point:** Not applicable**Ignition temperature:** Not determined**Decomposition temperature:** Not determined**Danger of explosion:** Product does not present an explosion hazard.**Explosion limits:**

<b>Lower:</b>	Not determined
<b>Upper:</b>	Not determined

**Vapor pressure:** Not determined**Density at 20°C (68°F):** 2.3608 g/cm<sup>3</sup>**10 Stability and reactivity****Thermal decomposition / conditions to be avoided:**

Decomposition will not occur if used and stored according to specifications.

**Materials to be avoided:**

Oxidizing agents

Acids

**Dangerous reactions** No dangerous reactions known**Dangerous products of decomposition:**

Hydrogen fluoride

Hydrogen iodide (HI)

Carbon monoxide and carbon dioxide

Iodine (I<sub>2</sub>)**11 Toxicological information****Acute toxicity:****LD/LC50 values that are relevant for classification:**

Inhalative	LCLo/4H	10000 ppm/4H (rat) (RTECS)
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**Primary irritant effect:****on the skin:** May cause irritation**on the eye:** May cause irritation**Sensitization:** No sensitizing effects known.**Other information (about experimental toxicology):**

Mutagenic effects have been observed on tests with bacteria.

**Subacute to chronic toxicity:**

Fluorides may cause salivation, nausea, vomiting, diarrhea and abdominal pain, followed by weakness, tremors, shallow respiration, convulsions and coma. May cause brain and kidney

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damage. Chronic fluoride poisoning can cause severe bone changes, loss of weight, anorexia, anemia and dental defects.

**Additional toxicological information:**

Danger through skin absorption.

To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

ACGIH A4: Not classifiable as a human carcinogen: Inadequate data on which to classify the agent in terms of its carcinogenicity in humans and/or animals.

**12 Ecological information:****Additional ecological information:****General notes:**

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Do not allow material to be released to the environment without proper governmental permits.

**13 Disposal considerations****Product:**

**Recommendation** Consult state, local or national regulations to ensure proper disposal.

**Uncleaned packagings:**

**Recommendation:** Disposal must be made according to official regulations.

**14 Transport information****DOT regulations:**

**Hazard class:** 2.2  
**Identification number:** UN1956  
**Proper shipping name (technical name):** COMPRESSED GAS, N.O.S. (Trifluoriodomethane)  
**Label** 2.2

**Land transport ADR/RID (cross-border)**

**ADR/RID class:** 2 1A Gases  
**Danger code (Kemler):** 20  
**UN-Number:** 1956  
**Description of goods:** 1956 COMPRESSED GAS, N.O.S.

**Maritime transport IMDG:**

**IMDG Class:** 2  
**UN Number:** 1956  
**Label** 2.2  
**Marine pollutant:** No  
**Proper shipping name:** COMPRESSED GAS, N.O.S. (Trifluoriodomethane)

**Air transport ICAO-TI and IATA-DGR:**

**ICAO/IATA Class:** 2.2  
**UN/ID Number:** 1956  
**Label** 2.2

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**Proper shipping name:** COMPRESSED GAS, N.O.S. (Trifluoriodomethane)**UN "Model Regulation":** UN1956, COMPRESSED GAS, N.O.S., 2.2**15 Regulations****Product related hazard informations:****Hazard symbols:**

Xn Harmful

**Risk phrases:**

68 Possible risk of irreversible effects.

**Safety phrases:**

36/37 Wear suitable protective clothing and gloves.

**National regulations**

All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory.

**Information about limitation of use:** For use only by technically qualified individuals.**16 Other information:**

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

**Department issuing MSDS:** Health, Safety and Environmental Department.**Contact:** Zachariah Holt**Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

HMIS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

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