



## Safety Data Sheet

Material Name: HALOCARBON 23

SDS ID: 00232358

### \*\*\*Section 1 - PRODUCT AND COMPANY IDENTIFICATION\*\*\*

**Product Identifier:** HALOCARBON 23

#### Manufacturer Information

SPECIALTY CHEMICAL PRODUCTS  
1407 Pennsylvania Ave.  
South Houston, TX 77587

General Information: 713-944-0900  
Emergency #: 1-800-424-9300 (CHEMTREC)  
Outside the US: 703-527-3887 (Call collect)

#### Chemical Family

halogenated, aliphatic

#### Synonyms

MTG MSDS 42; FLUOROFORM; TRIFLUOROMETHANE; CARBON TRIFLUORIDE; METHYL TRIFLUORIDE;  
ARCTON 1; FLUORYL; FREON 23; FREON F-23; GENETRON 23; PROPELLANT 23; REFRIGERANT 23; R23;  
UN 1984; CHF3; RTECS: PB6900000

### \*\*\*Section 2 - HAZARDS IDENTIFICATION\*\*\*

#### EMERGENCY OVERVIEW

**Color:** colorless

**Physical Form:** gas

**Odor:** odorless

**Health Hazards:** central nervous system depression

**Physical Hazards:** Containers may rupture or explode if exposed to heat.

#### POTENTIAL HEALTH EFFECTS

##### Inhalation

**Short Term:** mild irritation, nausea, vomiting, difficulty breathing, irregular heartbeat, headache, drowsiness, dizziness, disorientation, loss of coordination, unconsciousness

**Long Term:** no information on significant adverse effects

##### Skin

**Short Term:** blisters, frostbite

**Long Term:** no information is available

##### Eye

**Short Term:** frostbite, blurred vision

**Long Term:** no information is available

##### Ingestion

**Short Term:** ingestion of a gas is unlikely

**Long Term:** ingestion of a gas is unlikely

### \*\*\*Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS\*\*\*

CAS	Component	Percent
75-46-7	HALOCARBON 23	100

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## Component Related Regulatory Information

This product may be regulated, have exposure limits or other information identified as the following: Fluorides.

### \*\*\*Section 4 - FIRST AID MEASURES\*\*\*

#### Inhalation

If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. If breathing is difficult, oxygen should be administered by qualified personnel. Get immediate medical attention.

#### Skin

If frostbite or freezing occur, immediately flush with plenty of lukewarm water (105-115 F; 41-46 C). DO NOT USE HOT WATER. If warm water is not available, gently wrap affected parts in blankets. Get immediate medical attention.

#### Eyes

Contact with liquid: Immediately flush eyes with plenty of water for at least 15 minutes. Then get immediate medical attention.

#### Ingestion

If a large amount is swallowed, get medical attention.

#### Note to Physicians

For inhalation, consider oxygen.

### \*\*\*Section 5 - FIRE FIGHTING MEASURES\*\*\*

See Section 9 for Flammability Properties

**NFPA Ratings: Health: 2 Fire: 0 Reactivity: 0**

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

#### Flammable Properties

Negligible fire hazard. Containers may rupture or explode if exposed to heat.

#### Extinguishing Media

carbon dioxide, regular dry chemical

Large fires: Use regular foam or flood with fine water spray.

#### Fire Fighting Measures

Move container from fire area if it can be done without risk. Cool containers with water spray until well after the fire is out. Stay away from the ends of tanks. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tanks due to fire. For tank, rail car or tank truck, evacuation radius: 800 meters (1/2 mile). Use extinguishing agents appropriate for surrounding fire. Cool containers with water spray until well after the fire is out. Apply water from a protected location or from a safe distance. Do not get water directly on material. Reduce vapors with water spray. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas. Consider downwind evacuation if material is leaking.

### \*\*\*Section 6 - ACCIDENTAL RELEASE MEASURES\*\*\*

#### Occupational spill/release

Stop leak if possible without personal risk. Keep unnecessary people away, isolate hazard area and deny entry. Stay upwind and keep out of low areas.

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## \*\*\*Section 7 - HANDLING AND STORAGE\*\*\*

### Storage Procedures

Store and handle in accordance with all current regulations and standards. Subject to storage regulations: U.S. OSHA 29 CFR 1910.101. Keep separated from incompatible substances.

## \*\*\*Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION\*\*\*

### Component Analysis

#### HALOCARBON 23 (75-46-7)

ACGIH: 2.5 mg/m<sup>3</sup> TWA (as F, related to Fluorides)

OSHA (final): 2.5 mg/m<sup>3</sup> TWA (as F); 2.5 mg/m<sup>3</sup> TWA (dust, related to Fluorides)

OSHA (vacated): 2.5 mg/m<sup>3</sup> TWA (related to Fluorides)

### Component Biological Limit Values

#### HALOCARBON 23 (75-46-7)

ACGIH: 2 mg/L Medium: urine Time: prior to shift Parameter: Fluoride (background, nonspecific); 3 mg/L Medium: urine Time: end of shift Parameter: Fluoride (background, nonspecific, related to Fluorides)

### Ventilation

Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.

## PERSONAL PROTECTIVE EQUIPMENT

### Eyes/Face

For the gas: Eye protection not required, but recommended. For the liquid: Wear splash resistant safety goggles. Contact lenses should not be worn. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

### Protective Clothing

For the gas: Protective clothing is not required. For the liquid: Wear appropriate protective, cold insulating clothing.

### Glove Recommendations

Wear insulated gloves.

### Protective Materials

neoprene

### Respiratory Protection

Under conditions of frequent use or heavy exposure, respiratory protection may be needed.

Respiratory protection is ranked in order from minimum to maximum.

Consider warning properties before use.

#### **For Unknown Concentrations or Immediately Dangerous to Life or Health -**

Any supplied-air respirator with a full facepiece that is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained breathing apparatus operated in pressure-demand or other positive-pressure mode.

Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode.

## \*\*\*Section 9 - PHYSICAL AND CHEMICAL PROPERTIES\*\*\*

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<b>Physical State:</b> Gas	<b>Appearance:</b> Not available
<b>Color:</b> colorless	<b>Physical Form:</b> gas
<b>Odor:</b> odorless	<b>Odor Threshold:</b> Not available
<b>pH:</b> Not available	<b>Melting/Freezing Point:</b> -160 °C
<b>Boiling Point:</b> -84.4 °C	<b>Decomposition:</b> >260 °C
<b>Evaporation Rate:</b> Not available	<b>Vapor Pressure:</b> 33592 mmHg @ 21 °C
<b>Henry's Law Constant:</b> 0.0952	<b>Vapor Density (air = 1):</b> 2.417 @25 °C
<b>Density:</b> 2.86 kg/m3	<b>Specific Gravity (water=1):</b> 1.52 @ -100 °C (liquid)
<b>Water Solubility:</b> 0.1 % @ 25 °C	<b>KOW:</b> 0.64
<b>Log KOW:</b> Not available	<b>KOC:</b> 53 (estimated)
<b>Auto Ignition:</b> Not available	<b>Viscosity:</b> 0.0144 cP @25 °C
<b>Volatility:</b> 100 %	<b>Molecular Weight:</b> 70.01
<b>Molecular Formula:</b> C-H-F3	

## Solvent Solubility

**Soluble:** alcohol, acetone, benzene, hydrocarbons, chlorinated solvents, ketones, esters, organic acids

**Insoluble:** glycols, glycerol, phenols

## \*\*\*Section 10 - STABILITY AND REACTIVITY\*\*\*

### Chemical Stability

Stable at normal temperatures and pressure.

### Conditions to Avoid

Protect from physical damage and heat. Containers may rupture or explode if exposed to heat.

### Materials to Avoid

metals

### Decomposition Products

halogenated compounds, oxides of carbon, hydrogen fluoride

### Possibility of Hazardous Reactions

Will not polymerize.

## \*\*\*Section 11 - TOXICOLOGICAL INFORMATION\*\*\*

### Component Analysis - LD50/LC50

The components of this material have been reviewed in various sources and no selected endpoints have been identified.

### Component Carcinogenicity

**HALOCARBON 23 (75-46-7)**

**ACGIH:** A4 - Not Classifiable as a Human Carcinogen (related to Fluorides)

### Target Organs

**HALOCARBON 23 (75-46-7)**

central nervous system

### Additional Data

Stimulants such as epinephrine may induce ventricular fibrillation.

## \*\*\*Section 12 - ECOLOGICAL INFORMATION\*\*\*

### Component Analysis - Aquatic Toxicity

No LOLI ecotoxicity data are available for this product's components.

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## \*\*\*Section 13 - DISPOSAL CONSIDERATIONS\*\*\*

### Disposal Methods

Dispose in accordance with all applicable regulations.

### Component Waste Numbers

The U.S. EPA has not published waste numbers for this product's components.

## \*\*\*Section 14 - TRANSPORT INFORMATION\*\*\*

### US DOT Information

**Shipping Name:** Trifluoromethane

**UN/NA #:** UN1984 **Hazard Class:** 2.2

**Required Label(s):** 2.2

### TDG Information

**Shipping Name:** Trifluoromethane

**UN #:** UN1984 **Hazard Class:** 2.2

**Required Label(s):** 2.2

## \*\*\*Section 15 - REGULATORY INFORMATION\*\*\*

### U.S. Federal Regulations

None of this products components are listed under SARA Sections 302/304 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), or require an OSHA process safety plan.

### SARA 311/312

**Acute Health:** Yes **Chronic Health:** No **Fire:** No **Pressure:** Yes **Reactive:** No

### U.S. State Regulations

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA
HALOCARBON 23 (related to: Fluorides)	75-46-7	Yes <sup>1</sup>	No	Yes <sup>1</sup>	Yes	Yes <sup>1</sup>

Not regulated under California Proposition 65

### Component Analysis - Inventory

Component	CAS	US	CA	EU	AU	PH	JP	KR	CN	NZ
HALOCARBON 23	75-46-7	Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	Yes

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## \*\*\*Section 16 - OTHER INFORMATION\*\*\*

### Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; LOLI - List Of Lists™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH - Philippines; RCRA - Resource Conservation and Recovery Act; RID - European Rail Transport; RTECS - Registry of Toxic Effects of Chemical Substances®; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States

### Other Information

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