Material Name: TETRAFLUOROMETHANE

Manufacturer Information
MATHESON TRI-GAS, INC.
150 Allen Road, Suite 302
Basking Ridge, NJ 07920

General Information: 1-800-416-2505
Emergency #: 1-800-424-9300 (CHEMTREC)
Outside the US: 703-527-3887 (Call collect)

Chemical Family
halogenated, aliphatic

Synonyms
MTG MSDS 40; CARBON TETRAFLUORIDE; CARBON FLUORIDE (CF4); CARBON FLUORIDE; FC 14;
PERFLUOROMETHANE; R 14; R 14 (REFRIGERANT); METHANE, TETRAFLUORO-; FREON 14;
TETRAFLUOROCARBON; UN 1982; CF4; RTECS: FG4920000

Emergency Overview
Color: colorless
Physical Form: gas
Odor: odorless
Health Hazards: difficulty breathing
Physical Hazards: Containers may rupture or explode if exposed to heat.

Potential Health Effects
Inhalation
Short Term: nausea, vomiting, symptoms of drunkenness, disorientation, suffocation
Safety Data Sheet

Material Name: TETRAFLUOROMETHANE
SDS ID: MAT23000

Long Term: no information is available

Skin

Short Term: irritation
Long Term: no information is available

Eye

Short Term: frostbite
Long Term: no information is available

Ingestion

Short Term: no information on significant adverse effects
Long Term: no information is available

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

<table>
<thead>
<tr>
<th>CAS</th>
<th>Component</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>75-73-0</td>
<td>TETRAFLUOROMETHANE</td>
<td>100.0</td>
</tr>
</tbody>
</table>

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

Wash eyes immediately with large amounts of water, occasionally lifting upper and lower lids, until no evidence of chemical remains. Get medical attention immediately.

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: 1 Fire: 0 Reactivity: 0

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

Flammable Properties

Negligible fire hazard.

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.
Storage Procedures


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

Component Analysis

TETRAFLUOROMETHANE (75-73-0)

ACGIH: 2.5 mg/m³ TWA (as F, related to Fluorides)

OSHA (final): 2.5 mg/m³ TWA (as F, related to Fluorides)

OSHA (vacated): 2.5 mg/m³ TWA (related to Fluorides)

Component Biological Limit Values

TETRAFLUOROMETHANE (75-73-0)

ACGIH: 3 mg/g creatinine Medium: urine Time: prior to shift Parameter: Fluorides (background, nonspecific); 10 mg/g creatinine Medium: urine Time: end of shift Parameter: Fluorides (background, nonspecific, related to Fluorides)

Ventilation

Based on available information, additional ventilation is not required. 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.
### Respiratory Protection

The following respirators and maximum use concentrations are drawn from NIOSH and/or OSHA.

Any powered, air-purifying respirator with a full facepiece and organic vapor and acid gas cartridge(s).

Any chemical cartridge respirator with a full facepiece and organic vapor and acid gas cartridge(s).

**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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<th>Property</th>
<th>Value</th>
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<td>Physical Form</td>
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<td>Odor</td>
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<td>Boiling Point</td>
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<td>Vapor Pressure</td>
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<td>Specific Gravity</td>
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### **Section 10 - STABILITY AND REACTIVITY**

Chemical Stability

Stable at normal temperatures and pressure.
Safety Data Sheet

Material Name: TETRAFLUOROMETHANE

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

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

TETRAFLUOROMETHANE (75-73-0)

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

*** Section 12 - ECOLOGICAL INFORMATION***

Component Analysis - Aquatic Toxicity

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

*** 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.
Safety Data Sheet

Material Name: TETRAFLUOROMETHANE  
SDS ID: MAT23000

*** Section 14 - TRANSPORT INFORMATION ***

US DOT Information

Shipping Name: Tetrafluoromethane  
UN/NA #: UN1982  Hazard Class: 2.2  
Required Label(s): 2.2

TDG Information

Shipping Name: Tetrafluoromethane, compressed
UN #: UN1982  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:

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<th>MA</th>
<th>MN</th>
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<tr>
<td>TETRAFLUOROMETHANE ('related to: Fluorides')</td>
<td>75-73-0</td>
<td>No</td>
<td>No</td>
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Not regulated under California Proposition 65
Safety Data Sheet

Material Name: TETRAFLUOROMETHANE
SDS ID: MAT23000

Component Analysis - Inventory

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<th>Component</th>
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<tr>
<td>TETRAFLUOROMETHANE</td>
<td>75-73-0</td>
<td>Yes</td>
<td>DSL</td>
<td>EIN</td>
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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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End of Sheet MAT23000