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## **HALOCARBON C318- MATERIAL SAFETY DATA SHEET**

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### **24 Hour EMERGENCY CONTACT**

**U.S- CHEMTREC 1-800-424-9300**

**CANADA- CANUTEC 613-996-6666**

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## **1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

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### **Matheson Tri-Gas, Inc.**

*The telephone numbers listed below are emergency numbers, please contact your local branch for routine inquiries.*

#### **USA**

959 Route 46 East  
Parsippany, New Jersey  
07054-0624 USA  
**Phone: 973-257-1100**

#### **CANADA**

530 Watson Street  
Whitby, Ontario  
L1N 5R9 Canada  
**Phone: 905-668-3570**

**SUBSTANCE: HALOCARBON C318**

**SYMBOL:** C<sub>4</sub>F<sub>8</sub>

**TRADE NAMES/SYNONYMS:**

CYCLOBUTANE, OCTAFLUORO-; CYCLOOCTAFLUOROBUTANE;  
PERFLUOROCYCLOBUTANE; FREON C318; REFRIGERANT C318; R C318; C4F8;  
MAT17245; RTECS GU1779500

**CHEMICAL FAMILY:** halogenated, alicyclic

**CREATION DATE:** Jan 24 1989

**REVISION DATE:** Mar 16 1999

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## 2. COMPOSITION, INFORMATION ON INGREDIENTS

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**COMPONENT:** OCTAFLUOROCYCLOBUTANE

**CAS NUMBER:** 115-25-3

**EC NUMBER (EINECS):** 204-075-2

**PERCENTAGE:** 100.0

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## 3. HAZARDS IDENTIFICATION

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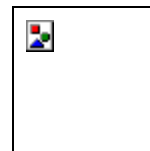
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**NFPA RATINGS (SCALE 0-4):** HEALTH=1 FIRE=0 REACTIVITY=0

**WHMIS CLASSIFICATION:** A

**EC CLASSIFICATION (ASSIGNED):**

No classification assigned.



**EMERGENCY OVERVIEW:**

**Color:** colorless

**Physical Form:** gas

**Odor:** odorless

**Major Health Hazards:** difficulty breathing

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

**POTENTIAL HEALTH EFFECTS:**

**INHALATION:**

**Short Term Exposure:** nausea, vomiting, irregular heartbeat, dizziness, tingling sensation, suffocation, convulsions, coma

**Long Term Exposure:** no information is available

**SKIN CONTACT:**

**Short Term Exposure:** blisters, frostbite

**Long Term Exposure:** no information is available

**EYE CONTACT:**

**Short Term Exposure:** frostbite, blurred vision

**Long Term Exposure:** no information is available

**INGESTION:**

**Short Term Exposure:** frostbite

**Long Term Exposure:** no information is available

**CARCINOGEN STATUS:**

**OSHA:** N

**NTP:** N

**IARC:** N

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**4. FIRST AID MEASURES**

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**INHALATION:**

When safe to enter area, remove from exposure. Use a bag valve mask or similar device to perform artificial respiration (rescue breathing) if needed. Keep warm and at rest. Get medical attention immediately.

**SKIN CONTACT:**

Wash if needed. If frostbite, freezing, or cryogenic burns occur, warm affected area in warm water. If this is not available, gently wrap affected parts in blankets. Allow circulation to return naturally. Get medical attention immediately.

**EYE CONTACT:**

It is unlikely that emergency treatment will be required. Wash with large amounts of water or normal saline until no evidence of chemical remains (at least 15-20 minutes). Get medical attention immediately.

**INGESTION:**

If vomiting occurs, keep head lower than hips to help prevent aspiration. Get medical attention, if needed.

**NOTE TO PHYSICIAN:**

For inhalation, consider oxygen.

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**5. FIRE FIGHTING MEASURES**

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**FIRE AND EXPLOSION HAZARDS:**

Negligible fire hazard.

**EXTINGUISHING MEDIA:**

carbon dioxide, regular dry chemical

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

**FIRE FIGHTING:**

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.

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## 6. ACCIDENTAL RELEASE MEASURES

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### OCCUPATIONAL 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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## 7. HANDLING AND STORAGE

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

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## 8. EXPOSURE CONTROLS, PERSONAL PROTECTION

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### EXPOSURE LIMITS:

#### OCTAFLUOROCYCLOBUTANE:

No occupational exposure limits established.

**VENTILATION:** Provide local exhaust or process enclosure ventilation system. Ensure compliance with applicable exposure limits.

**EYE PROTECTION:** Wear splash resistant safety goggles with a faceshield. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

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

**GLOVES:** Wear insulated gloves.

**RESPIRATOR:** 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.

Any supplied-air respirator with a full facepiece that is operated in a 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.

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

Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply.

Any self-contained breathing apparatus with a full facepiece.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

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**PHYSICAL STATE:** gas

**COLOR:** colorless

**ODOR:** odorless

**TASTE:** tasteless

**MOLECULAR WEIGHT:** 200.03

**MOLECULAR FORMULA:** C4-F8

**BOILING POINT:** 21 F (-6 C)

**FREEZING POINT:** -38 F (-39 C)

**VAPOR PRESSURE:** 2052 mmHg @ 21.1 C

**VAPOR DENSITY (air=1):** 7.33

**SPECIFIC GRAVITY:** Not applicable

**DENSITY:** 8.66 g/L @ 21 C

**WATER SOLUBILITY:** 0.014%

**PH:** Not applicable

**VOLATILITY:** Not applicable

**ODOR THRESHOLD:** Not available

**EVAPORATION RATE:** Not applicable

**VISCOSITY:** 0.012 cP @ 25 C

**COEFFICIENT OF WATER/OIL DISTRIBUTION:** Not applicable

**SOLVENT SOLUBILITY:**

**Soluble:** ether

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## 10. STABILITY AND REACTIVITY

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**REACTIVITY:**

Stable at normal temperatures and pressure.

**CONDITIONS TO AVOID:**

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

**INCOMPATIBILITIES:**

metals

**HAZARDOUS DECOMPOSITION:**

Thermal decomposition products: halogenated compounds, oxides of carbon

**POLYMERIZATION:**

Will not polymerize.

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**11. TOXICOLOGICAL INFORMATION**[Up to Table of Contents](#)**OCTAFLUOROCYCLOBUTANE:****ACUTE TOXICITY LEVEL:**

Insufficient Data.

**MUTAGENIC DATA:**

Available.

**ADDITIONAL DATA:**

Stimulants such as epinephrine may induce ventricular fibrillation.

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**12. ECOLOGICAL INFORMATION**[Up to Table of Contents](#)

Not available

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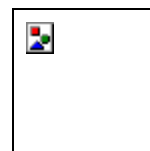
**13. DISPOSAL CONSIDERATIONS**[Up to Table of Contents](#)

Dispose in accordance with all applicable regulations.

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**14. TRANSPORT INFORMATION**[Up to Table of Contents](#)**U.S. DOT 49 CFR 172.101. SHIPPING NAME-UN NUMBER; HAZARD CLASS; PACKING GROUP; LABEL:**

Octafluorocyclobutane-UN1976; 2.2; Nonflammable gas



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**15. REGULATORY INFORMATION**[Up to Table of Contents](#)**U.S. REGULATIONS:**

TSCA INVENTORY STATUS: Y

TSCA 12(b) EXPORT NOTIFICATION: Not listed.

CERCLA SECTION 103 (40CFR302.4): N

SARA SECTION 302 (40CFR355.30): N

SARA SECTION 304 (40CFR355.40): N

SARA SECTION 313 (40CFR372.65): N

**SARA HAZARD CATEGORIES, SARA SECTIONS 311/312 (40CFR370.21):**

**ACUTE:** Y

**CHRONIC:** N

**FIRE:** N

**REACTIVE:** N

**SUDDEN RELEASE:** Y

**OSHA PROCESS SAFETY (29CFR1910.119):** N

**STATE REGULATIONS:**

California Proposition 65: N

**EUROPEAN REGULATIONS:**

**EC NUMBER (EINECS):** 204-075-2

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## **16. OTHER INFORMATION**

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