



Safety Data Sheet

OCTAFLUOROCYCLOBUTANE

Section 1: Product and Company Identification

Middlesex Gases & Technologies

292 Second Street
P.O. Box 490249
Everett, MA 02149
(617) 387-5050
(800) 649-6704
Fax (617) 387-3537
<http://www.middlesexgases.com/>

Product Code: OCTAFLUOROCYCLOBUTANE

Section 2: Hazards Identification



Warning

Hazard Classification:

Gases Under Pressure

Hazard Statements:

Contains gas under pressure; may explode if heated

Precautionary Statements

Storage:

Protect from sunlight.
Store in well-ventilated place.

Section 3: Composition/Information on Ingredients

CAS #
115-25-3

Chemical Substance	Chemical Family	Trade Names
Octafluorocyclobutane	halogenated, alicyclic	Cyclobutane, octafluoro-; Cyclooctafluorobutane; Freon C 318; Freon 318; FC-C 318; Perfluorocyclobutane; Propellant C318; R C318; Halocarbon C-138; UN 1976; 1,1,2,2,3,3,4,4-Octafluorocyclobutane

Section 4: First Aid Measures

Skin Contact	Eye Contact	Ingestion	Inhalation	Note to Physicians
Flush with plenty of lukewarm water if frostbite occurs. Get immediate medical attention.	Immediately flush eyes with plenty of water. Get medical attention.	If a large amount is swallowed, get medical attention.	Move to fresh air. Give artificial respiration if not breathing. Get medical attention.	For inhalation, consider oxygen.

Section 5: Fire Fighting Measures

Suitable Extinguishing Media	Products of Combustion	Protection of Firefighters
Carbon dioxide, regular dry chemical	Not available	<ul style="list-style-type: none"> ▪ Not available ▪ Not available ▪ Not available ▪ Not available

Section 6: Accidental Release Measures

Personal Precautions	Environmental Precautions	Methods for Containment
Keep people away. Stay upwind.	Stop leak if possible.	Isolate hazard areas. stop leak if possible without risk.

Methods for Cleanup	Other Information

Section 7: Handling and Storage

Handling	Storage
Store and handle in accordance with all federal, local, and state regulations.	Store and handle in accordance with all federal, local, and state regulations.

Section 8: Exposure Controls/Personal Protection

Exposure Guidelines
Not available

Engineering Controls

No specific controls are needed.

Eye Protection	Skin Protection	Respiratory Protection
Use proper eye protection	For gas, protective clothing is not required. Wear appropriate protective cold insulating clothing for liquid.	Not available

General Hygiene considerations

- Avoid breathing vapor or mist
- Avoid contact with eyes and skin
- Wash thoroughly after handling and before eating or drinking

Section 9: Physical and Chemical Properties

Physical State	Appearance	Color	Change in Appearance	Physical Form	Odor	Taste
Gas	Colorless	Colorless	Not available	Gas	Odorless	Tasteless

Flash Point	Flammability	Partition Coefficient	Autoignition Temperature	Upper Explosive Limits	Lower Explosive Limits
Not available	Not available	Not available	Not available	None	None

Boiling Point	Freezing Point	Vapor Pressure	Vapor Density	Specific Gravity	Water Solubility	pH	Odor Threshold	Evaporation Rate	Viscosity
21 F	-38 F	2052 mmHg at 21.1 deg C	7.33 (Air=1)	Not applicable	.014%	Not available	Not available	Not available	.012 cP at 25 deg C

Molecular Weight	Molecular Formula	Density	Weight per Gallon	Volatility by Volume	Volatility	Solvent Solubility
200.03	C4F8	8.66 g/L at 21 deg C	Not available	Not available	Not available	Not available

Section 10: Stability and Reactivity

Stability	Conditions to Avoid	Incompatible Materials
Stable at normal temp and pressure	Stable at normal temp and pressure	Metals

Hazardous Decomposition Products	Possibility of Hazardous Reactions
Thermal decomposition products: halogenated compounds, oxides of carbon	Will not occur

Section 11: Toxicology Information

Acute Effects

Oral LD50	Dermal LD50	Inhalation
Not available	Not available	Nausea, vomiting, irregular heartbeat, dizziness, tingling sensation, difficulty breathing, suffocation, convulsions, coma

Eye Irritation	Skin Irritation	Sensitization
Frostbite, blurred vision	Frostbite, blisters	Difficulty breathing

Chronic Effects

Carcinogenicity	Mutagenicity	Reproductive Effects	Developmental Effects
Not available	Not available	Not available	No data

Section 12: Ecological Information

Fate and Transport

Eco toxicity	Persistence / Degradability	Bioaccumulation / Accumulation	Mobility in Environment
Fish toxicity: not available Invertebrate toxicity: not available Algal toxicity: not available	Not available	Not available	Not available

Phyto toxicity: not available			
Other toxicity: not available			

Section 13: Disposal Considerations

Dispose in accordance with all applicable regulations

Section 14: Transportation Information

U.S. DOT 49 CFR 172.101

Proper Shipping Name	ID Number	Hazard Class or Division	Packing Group	Labeling Requirements	Passenger Aircraft or Railcar Quantity Limitations	Cargo Aircraft Only Quantity Limitations	Additional Shipping Description
Octafluorocyclobutane	UN1976	2.2	Not available	2.2	Not available	Not available	Not available

Canadian Transportation of Dangerous Goods

Shipping Name	UN Number	Class	Packing Group / Risk Group
Octafluorocyclobutane	UN1976	2.2	Not available

Section 15: Regulatory Information

U.S. Regulations

CERCLA Sections	SARA 355.30	SARA 355.40
102a/103 Hazardous substances: not regulated	Not available	Not available

SARA 370.21

Acute	Chronic	Fire	Reactive	Sudden Release
Yes	No	No	No	Yes

SARA 372.65

Not regulated

OSHA Process Safety

Not available

State Regulations

CA Proposition 65

Not regulated

Canadian Regulations

WHMIS Classification

A

National Inventory Status

US Inventory (TSCA)	TSCA 12b Export Notification	Canada Inventory (DSL/NDSL)
Listed	Not listed	Not determined

Section 16: Other Information

NFPA Rating

HEALTH:1, FIRE: 0, REACTIVITY: 0

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard