



Safety Data Sheet

Material Name: HALOCARBON 116

SDS ID: 00232361

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

Material Name: HALOCARBON 116

Manufacturer Information

SPECIALTY CHEMICAL PRODUCTS

Phone: (713) 944-0900

1407 Pennsylvania Ave.

South Houston, TX 77587

Emergency # 1-800-424-9300 (CHEMTREC)

Mfg Contact: Outside the US: 703-572-3887 (Collect Calls Accepted)

Chemical Family

halogenated, aliphatic

Synonyms

HEXAFLUOROETHANE; ETHANE, HEXAFLUORO-; F 116; FREON 116;
PERFLUOROETHANE; R 116; REFRIGERANT 116; UN 2193; FREON-116 PERFLUOROETHANE-AIRCO
(AIRCO); HEXAFLUOROETHANE-MATHESON (MATHESON GAS PRODUCTS); C2F6; HALOCARBON 116;
RTECS: KI4110000

Product Use

industrial

Usage Restrictions

none known

*** Section 2 - HAZARDS IDENTIFICATION ***

EMERGENCY OVERVIEW

Color: colorless

Physical Form: gas

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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, tingling sensation, suffocation, convulsions, coma

Long Term: no information is available

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: frostbite

Long Term: no information is available

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

CAS	Component	Percent
76-16-4	HALOCARBON 116	100.0

*** 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.

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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

Flush eyes with plenty of water.

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. 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.

Unsuitable Extinguishing Media

None known.

Protective Equipment and Precautions for Firefighters

Wear full protective fire fighting gear including self contained breathing apparatus (SCBA) for protection against possible exposure.

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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.

Thermal Decomposition Products

Combustion: halogenated compounds, oxides of carbon, hydrogen fluoride

*** 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.

*** Section 7 - HANDLING AND STORAGE ***

Handling Procedures

Avoid breathing gas. Use only with adequate ventilation.

Storage Procedures

Store and handle in accordance with all current regulations and standards. Protect from sunlight. Store in a well-ventilated area. Keep separated from incompatible substances. Subject to storage regulations: U.S. OSHA 29 CFR 1910.101.

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

Component Analysis

ACGIH, OSHA and NIOSH have not developed exposure limits for any of this product's components.

Component Biological Limit Values

There are no biological limit values for any of this product's components.

Ventilation

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

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Engineering Controls

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

PERSONAL PROTECTIVE EQUIPMENT

Eyes/Face

Wear splash resistant safety goggles with a faceshield. 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

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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Physical State:	Gas	Appearance:	Not available
Color:	colorless	Physical Form:	gas
Odor:	odorless	Odor Threshold:	Not available
Taste:	tasteless	Melting Point:	-94 °C
Boiling Point:	-79 °C	Flash Point:	Not available
Decomposition:	Not available	LEL:	Not applicable
UEL:	Not available	Vapor Pressure:	23028 mmHg @ 21 °C
Vapor Density (air = 1):	4.823	Density:	5.734 g/L @ 24 °C
Water Solubility:	insoluble	Log KOW:	Not available
Auto Ignition:	Not available	Viscosity:	0.0144 cP @ 25 °C
Molecular Weight:	138.01	Molecular Formula:	F3-C-C-F3

Solvent Solubility

Slightly Soluble: alcohol

*** 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

oxidizing materials

Combustion: halogenated compounds, oxides of carbon, hydrogen fluoride

Possibility of Hazardous Reactions

Will not polymerize.

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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

None of this product's components are listed by ACGIH, IARC, NTP, OSHA or DFG.

Irritation

No animal testing data available for skin or eyes.

Medical Conditions Aggravated by Exposure

None known.

Tumorigenic

No data available.

Mutagenic

No data available.

Reproductive Effects

No data available.

*** Section 12 - ECOLOGICAL INFORMATION ***

Component Analysis - Aquatic Toxicity

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

*** Section 13 - DISPOSAL CONSIDERATIONS ***

Disposal Methods

Dispose in accordance with all applicable regulations.

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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: Hexafluoroethane

UN/NA #: UN2193 **Hazard Class:** 2.2

Required Label(s): 2.2

TDG Information

Shipping Name: Hexafluoroethane, compressed

UN #: UN2193 **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 311/312 (40 CFR 370.21), 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	RI
HALOCARBON 116	76-16-4	No	No	No	Yes	No	No

Not regulated under California Proposition 65

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Component Analysis - Inventory

Component	CAS	US	CA	EU	AU	PH	JP	KR	CN	NZ
HALOCARBON 116	76-16-4	Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	Yes

* * * 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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