

Safety Data Sheet

Material Name: Halocarbon 41

SDS ID: 00244315

*** Section 1 - IDENTIFICATION ***

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: 703-572-3887 (Call collect)

Material Name: Halocarbon 41

Trade Names/Synonyms

Fluoromethane; Fluoromethane (CH₃F); Methyl fluoride

Chemical Family

halogenated, aliphatic

Product Use

industrial

Restrictions on Use

None known.

*** Section 2 - HAZARDS IDENTIFICATION ***

GHS Classification

Flammable gas, Category 1

Gas under pressure, Liquefied gas

Specific Target Organ Toxicity - Single Exposure, Category 3 (central nervous system)

GHS LABEL ELEMENTS

Symbol(s)



Signal Word

DANGER

Hazard Statement(s)

Extremely flammable gas

Contains gas under pressure; may explode if heated

May cause drowsiness and dizziness

Precautionary Statement(s)

Prevention

Keep away from heat, sparks, open flame, and hot surfaces - No smoking.

Avoid breathing gas.

Use only outdoors or in a well-ventilated area.

Response

Leaking gas fire: Do not extinguish, unless leak can be stopped safely.

Eliminate all ignition sources if safe to do so.

IF INHALED:

Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Call a POISON CENTER or doctor/physician if you feel unwell.

Storage

Store in a well-ventilated place.

Safety Data Sheet

Material Name: Halocarbon 41

SDS ID: 00244315

Protect from sunlight.
Keep container tightly closed.
Store locked up.

Disposal

Dispose of in accordance with applications with applicable regulations.

Other Hazards which do not Result in Classification

May cause asphyxia. May cause frostbite upon sudden release of compressed gas.

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

CAS	Component	Percent
593-53-3	Methyl fluoride	100

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

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.

Symptoms: Immediate

frostbite, suffocation, central nervous system effects

Symptoms: Delayed

No data available.

*** Section 5 - FIRE FIGHTING MEASURES ***

See Section 9 for Flammability Properties

Specific Hazards Arising from the Chemical

Severe fire hazard. The vapor is heavier than air. Vapors or gases may ignite at distant ignition sources and flash back.

Extinguishing Media

carbon dioxide, regular dry chemical
Large fires: 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.

Safety Data Sheet

Material Name: Halocarbon 41

SDS ID: 00244315

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. For fires in cargo or storage area: Cool containers with water from unmanned hose holder or monitor nozzles until well after fire is out. If this is impossible then take the following precautions: Keep unnecessary people away, isolate hazard area and deny entry. Let the fire burn. 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: Stop leak if possible without personal risk. Let burn unless leak can be stopped immediately. For smaller tanks or cylinders, extinguish and isolate from other flammables. Evacuation radius: 800 meters (1/2 mile). Do not attempt to extinguish fire unless flow of material can be stopped first. Flood with fine water spray. Cool containers with water spray until well after the fire is out. Apply water from a protected location or from a safe distance. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas. Evacuate if fire gets out of control or containers are directly exposed to fire. Evacuation radius: 500 meters (1/3 mile). Consider downwind evacuation if material is leaking.

Hazardous Combustion Products

Combustion: halogenated compounds, oxides of carbon

*** Section 6 - ACCIDENTAL RELEASE MEASURES ***

Personal Precautions

Wear personal protective clothing and equipment, see Section 8.

Environmental Precautions

Avoid release to the environment.

Methods for Containment

Leaking gas fire: Do not extinguish, unless leak can be stopped safely. Avoid heat, flames, sparks and other sources of ignition. Do not touch spilled material. Stop leak if possible without personal risk. Reduce vapors with water spray.

Cleanup Methods

Eliminate all ignition sources if safe to do so. All equipment used when handling the product must be grounded. Keep unnecessary people away, isolate hazard area and deny entry. Ventilate closed spaces before entering. Damaged cylinders should be handled only by specialists.

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

Handling Procedures

Use only with adequate ventilation. Wash thoroughly after handling.

Storage Procedures

Store and handle in accordance with all current regulations and standards. Subject to storage regulations: U.S. OSHA 29 CFR 1910.101. Grounding and bonding required. Keep away from heat, sparks and flame. Store in a well-ventilated area. Protect from sunlight. Store locked up. Store in a tightly closed container. Keep separated from incompatible substances.

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

Component Exposure Limits

Methyl fluoride (593-53-3)

ACGIH: 2.5 mg/m³ TWA (as F)

OSHA (Final): 2.5 mg/m³ TWA (as F)

OSHA (Vacated): 2.5 mg/m³ TWA

Component Biological Limit Values

Methyl fluoride (593-53-3)

ACGIH: Fluorides in urine: 3 mg/g creatinine, prior to shift (B,Ns); Fluorides in urine: 10 mg/g creatinine, end of shift (B,Ns)

Engineering Controls

Ventilation equipment should be explosion-resistant if explosive concentrations of material are present. Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.

Safety Data Sheet

Material Name: Halocarbon 41

SDS ID: 00244315

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

For the gas: Wear appropriate chemical resistant gloves. For the liquid: 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.

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 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 ***

Physical State:	Gas	Appearance:	Colorless gas
Color:	colorless	Physical Form:	gas
Odor:	sweet odor	Odor Threshold:	Not available
Melting/Freezing Point:	-142 °C	Boiling Point:	-78 °C
Flash Point:	extremely flammable	Decomposition:	Not available
LEL:	Not available	UEL:	Not available
Vapor Pressure:	3810 kPa @ 21.1 °C	Vapor Density (air = 1):	1.195
Density:	1.4397 g/L @ 20 °C	Water Solubility:	166 % @ 15 °C
Log KOW:	Not available	Coeff. Water/Oil Dist:	Not available
Auto Ignition:	Not available	Viscosity:	0.01086 cP @ 25 °C
Molecular Weight:	34.03	Molecular Formula:	C-H3-F

Solvent Solubility

Soluble: alcohol, ether, benzene, chloroform

*** Section 10 - STABILITY AND REACTIVITY ***

Chemical Stability

Stable at normal temperatures and pressure.

Conditions to Avoid

Avoid heat, flames, sparks and other sources of ignition. Minimize contact with material. Containers may rupture or explode if exposed to heat.

Possibility of Hazardous Reactions

Will not polymerize.

Incompatible Materials

oxidizing materials

Hazardous Decomposition

Combustion: halogenated compounds, oxides of carbon

Safety Data Sheet

Material Name: Halocarbon 41

SDS ID: 00244315

*** Section 11 - TOXICOLOGICAL INFORMATION ***

Acute and Chronic Toxicity

Component Analysis - LD50/LC50

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

RTECS Acute Toxicity (selected)

The components of this material have been reviewed and RTECS publishes no data as of the date on this document.

Immediate Effects

frostbite, suffocation, central nervous system effects

Delayed Effects

No data available.

Irritation/Corrosivity Data

No animal testing data available for skin or eyes.

RTECS Irritation

The components of this material have been reviewed and RTECS publishes no data as of the date on this document.

Target Organs

Methyl fluoride (593-53-3)

central nervous system.

Respiratory Sensitizer

No data available.

Dermal Sensitizer

No data available.

Carcinogenicity

Component Carcinogenicity

Methyl fluoride (593-53-3)

ACGIH: A4 - Not Classifiable as a Human Carcinogen

RTECS Mutagenic

The components of this material have been reviewed, and RTECS publishes data for one or more components.

Reproductive Effects Data

No data available.

RTECS Tumorigenic

The components of this material have been reviewed, and RTECS publishes data for one or more components.

Specific Target Organ Toxicity - Single Exposure

central nervous system

Specific Target Organ Toxicity - Repeated Exposure

No data available.

Aspiration Hazard

Not applicable.

Medical Conditions Aggravated by Exposure

None known.

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.

Persistence and Degradability

Has a long atmospheric lifetime.

Bioaccumulative Potential

No data available.

Mobility in Environmental Media

No data available.

Safety Data Sheet

Material Name: Halocarbon 41

SDS ID: 00244315

*** Section 13 - DISPOSAL CONSIDERATIONS ***

Disposal Methods

Dispose in accordance with all applicable regulations. Subject to disposal regulations: U.S. EPA 40 CFR 262.
Hazardous Waste Number(s): D001.

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: Methyl fluoride
UN/NA #: UN2454 **Hazard Class:** 2.1
Required Label(s): 2.1

IMDG Information

Shipping Name: Methyl fluoride
UN #: UN2454 **Hazard Class:** 2.1

*** Section 15 - REGULATORY INFORMATION ***

Component Analysis

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 Hazardous Categories

Acute Health: Yes **Chronic Health:** No **Fire:** Yes **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
Methyl fluoride (related to: Fluorides)	593-53-3	No	No	Yes ¹	Yes	No	Yes ¹

Not regulated under California Proposition 65

Component Analysis - Inventory

Component	CAS	US	CA	EU	AU	PH	JP	KR	CN	NZ
Methyl fluoride	593-53-3	Yes	NSL	EIN	No	Yes	No	No	Yes	Yes

*** Section 16 - OTHER INFORMATION ***

NFPA Ratings: Health: 2 **Fire:** 4 **Reactivity:** 0

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

Safety Data Sheet

Material Name: Halocarbon 41

SDS ID: 00244315

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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