

MSDS

Material Safety Datasheets



Section 1 – Chemical Product and Company Identification

Product Name	HFC-125
Chemical Name	1,1,1,2,2-pentafluoroethane
Synonym	Pentafluoroethane; HFC-125; R-125; MH125™; FE-25™
Product Use	Fire extinguishing agent
Manufacturer	Shanghai Waysmos Fine Chemical Co., Ltd.
Address	388 Liangle Road, Laogang Town, Pudong New Area, Shanghai 201322, China
Email	sales@waysmos.com
Telephone	86-21-58162351
Fax	86-21-58162299

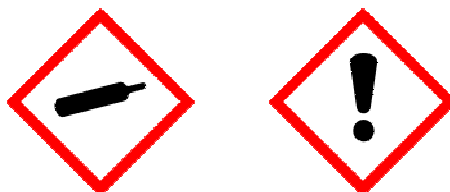
Section 2 – Hazard Identification

OSHA/HCS status This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Classification of the substance or mixture Gases under pressure - Liquefied gas

GHS label elements

Hazard pictograms



Signal word Warning

Hazard statements H280: Contains gas under pressure; may explode if heated
P210: Keep away from heat/sparks/open flame. – No smoking
P233: Keep container tightly closed in a cool/well-ventilated place

Precautionary statements P260: Do not breathe dust/fumes/gas/vapours/spray
P273: Avoid release to the environment
P280: Wear protective gloves/protective clothing/eye protection/face protection
P403: Use and store only in a well-ventilated area
May cause frostbite
May displace oxygen and cause rapid suffocation

Other Hazard Overheating and over pressurizing may cause gas release or violent cylinder bursting
In addition to any other important health or physical hazards, this product may displace oxygen and cause rapid suffocation

Safety Data Sheet

Section 3 – Composition/Information on Ingredients

Ingredient name	CAS No.	%(weight)
Pentafluoroethane	354-33-6	≥99.00

Section 4 – First Aid Measures

Inhalation	Remove to fresh air Oxygen or artificial respiration if needed If unconscious, place in recovery position and get medical attention immediately
Skin	Flush exposed skin with lukewarm water (not hot), or use other means to warm skin slowly Remove contaminated clothing and shoes Get medical attention if frostbitten by liquid or if irritation persists
Eyes	Immediately flush with large amounts of water for at least 15 minutes Get medical attention if irritation occurs
Ingestion	As this product is a gas, refer to the inhalation section
Note to physician	Immediate medical attention is not required When symptoms persist or in all cases of doubt seek medical advice

Section 5 – Fire Fighting Measures

Extinguishing media	Pentafluoroethane is a fire extinguishing media. Use media appropriate for surrounding material
Special hazards arising from the substance or mixture	Thermal decomposition can lead to release of irritating or toxic gases/vapors: carbon oxides, halogenated compounds Contains gas under pressure. In a fire or if heated, a pressure increase will occur and the container may burst or explode
Special protective equipment for firefighters	Wear self-contained breathing apparatus with a full face-piece operated in positive pressure mode and chemical-protective clothing. Prevent fire extinguishing water from contaminating surface water or the ground water system

Section 6 – Accidental Release Measures

Personal precautions, protective equipment and emergency procedures	Refer to SECTION 8 for personal protective equipment. Prevention of skin and eye contact. Ensure adequate ventilation. Remove all sources of ignition. Shut off gas supply if this can be done safely. Isolate area until gas has dispersed
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Safety Data Sheet

Environmental precautions	Do not discharge into drains/surface waters/groundwater
Methods and material for containment and cleaning up	Evacuate area. Keep upwind. Stop leak if without risk. Ventilate area especially low places remove open flames and heating elements. Disperse gas with floor level forced air
Reference to other SECTIONS	See SECTION 7 for information on safe handling See SECTION 8 for information on personal protection equipment See SECTION 13 for information on disposal

Section 7 – Handling and Storage

Handling	Do not puncture or incinerate container. Use equipment rated for cylinder pressure. Close valve after each use and when empty. Protect cylinders from physical damage; do not drag, roll, slide, or drop. Use a suitable hand truck for cylinder movement.
Storage	Keep container tightly closed and in a cool, well-ventilated place. Keep out of direct sunlight. Keep away from heat and ignition sources.
Packing material	Steel drum

Section 8 – Exposure Controls/Personal Production

8.1 Control parameters

Occupational exposure limit values	8-h TWA WEEL: 1000 ppm. American Industrial Hygiene Association, Workplace Environmental Exposure Limit (WEEL) Committee
DNEL (Derived No Effect Level) for workers and the general population	Not available
PNEC (Predicted No Effect Concentration) values	Not available

8.2 Exposure controls

Appropriate engineering controls	Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits
Personal protective equipment	
Respiratory Protection	In case of inadequate ventilation wear respiratory protection
Skin Protection	Wear protective gloves/clothing to prevent contact
Eye Protection	Safety glasses/chemical splash goggles
Environmental exposure controls	Do not empty into drains

Section 9 – Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Revision date: 02/06/2015 Version 2.0

Appearance	Liquefied gas
Color	colorless
Odour	inodorous
pH	Not available
Melting point	-103 °C
Boiling point	-48.5 °C
Flash point	Not available
Evaporation rate	Not available
Flammability (solid, gas)	Not flammable
Upper/lower flammability or explosive limits	Not available
Vapour pressure(25°C)	1310Kpa
Liquid density(25°C)	1.19 g/cm ³
Solubility(ies)	Not available
Partition coefficient: n-octanol/water	Not available
Auto-ignition temperature	Not available
Viscosity	Not available
Explosive properties.	May explode if heated
Oxidising properties	Not available

9.2 Other information

No data available.

Section 10 – Stability and Reactivity

Reactivity	Stable under recommended storage and handling conditions (see SECTION 7, handling and storage).
Chemical stability	Stable under normal conditions of use.
Possibility of hazardous reactions	No known hazardous reactions
Conditions to avoid	Keep away from heat and ignition sources. Protect from sunlight
Incompatible materials	Strong oxidizing materials
Hazardous decomposition products	Thermal decomposition can lead to release of irritating or toxic gases/vapors: carbon oxides, halogenated compounds.

Section 11 – Toxicological Information

11.1 Information on toxicological effects

Acute Toxicity

Ingredient name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Pentafluoroethane	Not data available	Not data available	2,910 ppm/4h (rat).

Skin corrosion/irritation	No information available
Serious eye damage/irritation	No information available

Safety Data Sheet

Respiratory or skin sensitization	No information available
Germ cell mutagenicity	No information available
Reproductive toxicity	No information available
STOT-single exposure	No information available
STOT-repeated exposure	No information available
Aspiration hazard	No information available
Carcinogenicity	Not listed as a carcinogen by NTP, IARC, or OSHA
Cardiac sensitization threshold limit	No information available

Section 12 – Ecological Information






Toxicity	
Algae 96h(EC50)	142mg/L
Daphnia magna 48h	>200 mg/L
Degradability	Atmospheric lifetime is approximately 29 years
Bioaccumulation/ Accumulation	Bioaccumulation is not expected (Log Kow < 3)
Mobility in Environmental Media	Not available
Other adverse effects	Ozone Depletion Potential (CFC 11 = 1.0): 0.00 Global Warming Potential (CO2 = 1.0): 3,450

Section 13 –Disposal Considerations

Waste Disposal Method

Disposal must be made according to local and national regulations. Empty containers should be taken for local recycling, recovery or waste disposal.

Section 14—Transport Information

Item	DOT	TDG	Mexico	IMDG	IATA / ICAO
UN-Number	3220	3220	3220	3220	3220
UN proper shipping name	Pentafluoroethane	Pentafluoroethane	Pentafluoroethane	Pentafluoroethane	Pentafluoroethane
Hazard class	2.2	2.2	2.2	2.2	2.2
Label					
Packaging Group	-	-	-	-	-

Special precautions for user

Avoid transportation in vehicles where the load space is not separated from the driver's compartment. Ensure valves are closed and not

Safety Data Sheet

leaking Always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident

Section 15—Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Listed in international inventories:

Ingredient name	TSCA	DSL	NDSL	ELINCS	ENCS	CHINA	KECL	PICCS	AICS
Pentafluoroethane	YES	YES	NDA	YES	YES	YES	YES	YES	YES

15.2. Other regulations

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 313 Toxic Chemicals (40 CFR 372.65) - Supplier Notification Required

- not regulated.

Section 16 – Other Information

In accordance with good practices of personal cleanliness and hygiene handle with the care and avoid unnecessary contact with this product.

This information is being supplied to you under OSHA Hazard Communication Standard 29 CFR 1910.1200 and is offered in good faith as typical values and not as a product specification. The information contained herein is based on the data available to us and is believed to be true and accurate.

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