

Revised date 19.12.2023

MATERIAL SAFETY DATA SHEET

HFC 423A

CHEMICAL PRODUCT

Corporate MSDS Number : TAB-003016
Composition : HFC 423A (100.0%)
Formula : CH₂FCF₃ / C₃HF₇
Chemical Name : 1,1,1,2-tetrafluoroethane+1,1,1,2,3,3,3-Heptafluoropropane
CAS# : 811-97-2 + 431-89-0
UN# : 1078
HS Code : 382764
Hazard : 2.2

COMPANY IDENTIFICATION

TABRIGAS Egypt
Port Said Free Zone area - Egypt
Sunday - Thursday (9:00 - 17:00)
00 202 2734 22 77 / 78 / 79
info@tabrigas.com
www.tabrigas.com

PRODUCT USE

Refrigerant

TRADE NAMES & SYNONYMS

HFC 423A
Isceon[®] 39TC

HAZARDS IDENTIFICATION

Rapid evaporation of the liquid may cause frostbite. Vapors are heavier than air and can cause suffocation by reducing oxygen available for breathing.

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FIRST-AID MEASURES

General advice:

If unconscious place in recovery position and seek medical advice. Never give anything by mouth to an unconscious person. If breathing is irregular or stopped, administer artificial respiration. If symptoms persist, call a physician.

Inhalation

Move to fresh air. Keep the patient warm and at rest. Artificial respiration and/or oxygen may be Necessary.

Skin contact

Wash off with warm water. Take off all contaminated clothing immediately.

Eye contact

Rinse thoroughly with plenty of water, also under the eyelids. Consult a physician. Notes to physician
Treatment: Do not give adrenaline or similar drugs.

FIRE FIGHTING MEASURES

Specific hazards during firefighting:

Pressure build-up

Special protective equipment for fire-fighters:

In the event of a fire, wear a self-contained breathing apparatus.

Further information:

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Cool containers/tanks with water spray.

ACCIDENTAL RELEASE MEASURES

Personal precautions:

Evacuate personnel to safe areas. Ventilate the area.

Environmental precautions:

Should not be released into the environment.

Methods for cleaning up:

Evaporates.

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HANDLING AND STORAGE

Handling

Advice on safe handling:

Provide sufficient air exchange and/or exhaust in work rooms.

Advice on protection against fire and explosion:

No special protective measures against fire required.

Storage

Requirements for storage areas and containers:

Keep container tightly closed in a dry and well-ventilated place. Store in original container.

Advice on common storage:

No materials to be especially mentioned.

German storage class:

2A: Compressed, liquefied or pressurized gas

EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Type Form of exposure	Control Parameters	Update	Basis
1,1,1,2- Tetrafluoroethane (R134a)	811-97-2	TWA	4 240 mg/m ³ 1 000 ppm	2001	EH40 OES

Engineering measures

Ensure adequate ventilation, especially in confined areas.

Personal Protective Equipment

Respiratory protection

For rescue and maintenance work in storage tanks use self-contained breathing apparatus. Vapors are heavier than air and can cause suffocation by reducing oxygen available for breathing.

Hand protection

Heat insulating gloves

Eye protection

Safety glasses

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Hygiene measures

Handle in accordance with good industrial hygiene and safety practice.

PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL AND CHEMICAL PROPERTIES

Form	: liquefied gas,
Color	: colorless,
Odor	: slight, ether-like,
pH	: neutral
Boiling point/range	: ca. -25 °C @ 1 013 hPa
Flash point	: does not flash
Upper explosion limit	: Not applicable
Vapor pressure	: ca. 6 400 hPa @ 25 °C
Density	: 1,3 g/cm ³ @ 25 °C, (as liquid)
Water solubility	: slightly soluble

STABILITY AND REACTIVITY

Conditions to Avoid

The product is not flammable in air under ambient conditions of temperature and pressure. When pressurized with air or oxygen the mixture may become flammable. Certain mixtures of HCFCs or HFCs with chlorine may become flammable or reactive under certain conditions.

Incompatibility

Alkali metals Alkaline earth metals, Powdered metals, Powdered metal salts

Hazardous decomposition products

Hydrogen halides, carbon dioxide (CO₂), Carbon monoxide, fluorocarbons, carbonyl halides**TOXICOLOGICAL INFORMATION**

Acute inhalation toxicity

1, 1, 1, 2-Tetrafluoroethane (HFC-134a)

LC₅₀/ 4 h/ rat: > 2 085 mg/l

1, 1, 1, 2, 3, 3, 3- Heptafluoropropane

LC₅₀/ 4 h/ rat: 5 485 mg/l

Carcinogenicity assessment:

Did not show carcinogenic effects in animal experiments.

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Toxicity to reproduction assessment:

Did not show mutagenic or teratogenic effects in animal experiments.

Human experience:

Excessive exposures may affect human health, as follows:

Inhalation Severe shortness of breath, Irregular cardiac activity, narcosis

Further information:

Rapid evaporation of the liquid may cause frostbite.

ECOLOGICAL INFORMATION

Toxicity to fish

1, 1, 1, 2-Tetrafluoroethane (R134a): LC50 / 96 h/ Oncorhynchus mykiss (rainbow trout): 450 mg/l

Aquatic toxicity

1, 1, 1, 2-Tetrafluoroethane (R134a): / EC50/ 48 h/ Daphnia: 980 mg/l

DISPOSAL CONSIDERATIONS

Product:

Can be used after re-conditioning.

Contaminated packaging:

Empty pressure vessels should be returned to the supplier.

TRANSPORTATION INFORMATION

ADR	Class	: 2.2
	Classification Code	: 2A
	HI no:	: 20
	UN-No	: 1078
	Labeling No.	: 2.2
	Proper shipping name	: Refrigerant gas, n.o.s. (Tetrafluoroethene, 1, 1, 1, 2, 3, 3, 3- Heptafluoropropane)
IATA_C	Class	: 2.2
	UN-No	: 1078
	Labeling No.	: 2.2
	Proper shipping name	: Refrigerant gas, n.o.s. (Tetrafluoroethene, 1, 1, 1, 2, 3, 3, 3- Heptafluoropropane)

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IMDG	Class	: 2.2
	UN-No	: 1078
	Labeling No.	: 2.2
	Proper shipping name	: Refrigerant gas, n.o.s. (Tetrafluoroethene, 1, 1, 1, 2, 3, 3, 3- Heptafluoropropane)

REGULATORY INFORMATION

Labeling according to EC Directives

Not a hazardous substance or preparation according to EC-directives 67/548/EEC or 1999/45/EC.
The product does not need to be labeled under EC directives or respective national laws.

End of MSDS
(Version August 2024)

HFEC 423A

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HFC GWP