Material Safety Data Sheet

R-152A

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: R-152A

DISTRIBUTOR FOR MIDDLE- EAST: Brothers Gas
204, Al Fattan Plaza, Al Garhoud, Dubai

FOR MORE INFORMATION CALL:
(Monday-Friday, 8:00am-5:00pm)
+971 4 251 7979

IN CASE OF EMERGENCY CALL:
CHEMTREC: +971 50 221 2656

2. COMPOSITION / INFORMATION ON INGREDIENTS

INGREDIENT NAME	CAS NUMBER	WEIGHT %
Difluoroethane	75-37-6	100

3. HAZARDS IDENTIFICATION

POTENTIAL HEALTH EFFECTS:

Inhalation of HFC-152a may cause nonspecific discomfort such as nausea, headache or weakness, or temporary nervous system drowsiness or unconsciousness.

Higher exposures may lead to irritation of nose, throat, and lungs with cough, difficulty breathing or shortness of breath, temporary alteration of the heart's electrical activity with irregular pulse, palpitations, or inadequate circulation, or abnormal kidney function as detected by laboratory tests. Gross overexposure may be fatal.

Individuals with preexisting diseases of the central nervous system, cardiovascular system, lungs or kidney may have increased susceptibility to the toxicity of excessive exposures.

CARCINOGENICITY INFORMATION:

None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.

4. FIRST AID MEASURES

SKIN:

In case of contact, immediately flush skin with plenty of water for at least 15 minutes. Treat for frostbite if necessary, by gently warming affected area.

EYES:

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.

INHALATION:

If high concentrations are inhaled, immediately remove to fresh air. Keep person clam. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

INGESTION:

Ingestion is not considered a potential route of exposure.

ADVICE TO PHYSICIAN:

Because of the possible disturbances of cardiac rhythm, catecholamine drugs, such as epinephrine, should be used with special caution and only in situations of emergency life support.

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

FLASH POINT:	<-50 deg. C (<-58 deg. F)
AUTOIGNITION TEMPERATURE:	454°C (849 deg. F)
UPPER FLAME LIMIT (volume % in air):	16.9%
LOWER FLAME LIMIT (volume % in air):	3.9%

FIRE AND EXPLOSION HAZARDS:

Flammable. Cylinders are equipped with temperature and pressure relief devices but may still rupture under fire conditions. Use water spray to cool cylinders and tanks

HFC-152a fire decomposition by-products will include hydrofluoric acid, and possible carbonyl fluoride. Avoid contact with these materials, which are toxic and irritation. Evacuate personnel immediately in the event of a fire involving HFC-152a.

EXTINGUISHING MEDIA:

Water Spray, Water Fog, Dry Chemical, Carbon Dioxide, “Alcohol” foam.

FIRE FIGHTING INSTRUCTIONS:

Keep container cool with water spray. If gas exiting container ignites, stop flow of gas. Do not put out the fire unless leak can be stopped immediately. Self-contained breathing apparatus (SCBA) is required if containers rupture and contents are released under fire condition.

6. ACCIDENTAL RELEASE MEASURES

SAFEGUARDS (Personnel):

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

ACCIDENTAL RELEASE MEASURES:

If a spill can cause a concentration in excess of 1,000 ppm, turn off valves and ignition sources. Evacuate area. Ventilate area, especially low places where heavy vapors might collect. Wear self-contained breathing apparatus (SCBA).

If this product is spilled and not recovered, or is recovered as a waste for treatment or disposal, the CERCLA Reportable Quantity is 100 lbs. (Release of an unlisted Hazardous Waste characteristic of ignitability).

7. HANDLING AND STORAGE

NORMAL HANDLING: (Always wear recommended personal protective equipment.)

Avoid breathing high concentration of vapors and avoid liquid contact with skin or eyes. Use with sufficient ventilation to keep employee exposure below recommended limits. Lines and equipment which will contain 152a aerosol propellant should be pre-tested with nitrogen using soapy water to detect leaks.

STORAGE RECOMMENDATIONS:

Clean, dry area. Do not heat above 52 deg. C / 125 deg. F.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS:

Normal ventilation for standard manufacturing procedures is generally adequate. Local exhaust should be used when large amounts are released. Mechanical exhaust should be used in low or enclosed places. Ground all equipment and cylinders before use. Use explosion-proof electrical equipment rated Class I, Group D in Division 1 locations. In Division 2 locations, all spark-producing electrical equipment must be explosion-proof and rated Class I, Group D. Non-sparking motors need not be explosion-proof.

PERSONAL PROTECTIVE EQUIPMENT:

SKIN PROTECTION:

Impervious gloves when handling liquid. Fire protective clothing (NOMEX) with antistatic control should be worn

EYE PROTECTION:

Chemical splash goggles should be worn when handling liquid.

RESPIRATORY PROTECTION:

Under normal manufacturing conditions, no respiratory protection is required when using this product. Self-contained breathing apparatus (SCBA) is required if a large release occurs.

EXPOSURE GUIDELINES

(Exposure Limits)

INGREDIENT NAME	ACGIH TLV	OSHA PEL	OTHER LIMIT
Difluoroethane	None Established	None Established	*1000 ppm TWA (8hr)

* = Workplace Environmental Exposure Level (AIHA)

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Clear, colorless liquid and vapor
PHYSICAL STATE:	Gas at ambient temperatures
ODOR:	Faint ethereal odor
SOLUBILITY IN WATER (weight %):	0.28 WT% @ 25C (77F) (87 psia)
BOILING POINT:	-25°C (-13°F)
VAPOR PRESSURE:	87 psia @ 25 deg. C (77°F)
VAPOR DENSITY (air = 1.0):	2.4
% VOLATILES:	100 WT%
DENSITY	0.90 g/cc at 25 deg. C (77 deg. F) - Liquid

10. STABILITY AND REACTIVITY

CHEMICAL STABLILITY:

Material is stable. However, avoid open flames and high temperatures.

INCOMPATIBILITY WITH OTHER MATERIALS:

Incompatible with alkali or alkaline earth metals-powdered Al, Zn, Be, etc.

POLYMERIZATION:

Polymerization will not occur.

OTHER HAZARDS:

Decomposition products are hazardous. This material can be decomposed by high temperatures (open flames, glowing metal surfaces, etc.) forming hydrofluoric acid and possible carbonyl fluoride.

11. TOXICOLOGICAL INFORMATION

ANIMAL DATA:

Oral ALD:	>1500 mg/kg in rats
Inhalation ALC, 4 hr:	383,000 ppm in rats

HFC-152a has not been tested for skin and eye irritancy, or for animal sensitization.

Ingestion of single high doses of HFC-152a caused weight loss and lethargy.

Inhalation of high levels of HFC-152a caused labored breathing, lung irritation, lethargy, incoordination and loss of consciousness. Cardiac sensitization occurred in dogs exposed to a concentration of 150,000 ppm in air and given an intravenous epinephrine challenge.

Repeated inhalation exposures caused increased urinary fluoride, reduced kidney weight, and reversible kidney changes. Based on an independent peer review the reversible kidney changes are considered artifacts of the tissue and slide processing and not a compound related effect.

Animal testing demonstrate no carcinogenic activity nor developmental effects. No animal data are available to define reproductive effects of HFC-152a.

HFC-152a has not produced genetic damage in bacterial cultures. There are reports indicating that HFC-152a produce genetic damage in some mammalian cell culture tests. A weak genotoxic effect in germ cells of Drosophila melanogaster has been reported. It has not been tested in animals.

12. ECOLOGICAL INFORMATION

DEGRADABILITY (BOD): R-152a is a gas at room temperature; therefore, it is unlikely to remain in water.

13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL:

Reclaim by distillation, incinerate, or remove to a permitted waste facility. Comply with Federal, State, and local regulations.

This material may be a RCRA hazardous waste upon disposal due to the ignitability characteristic.

14. TRANSPORT INFORMATION

US DOT HAZARD CLASS: US DOT PROPER SHIPPING NAME: 1,1-Difluoroethane
US DOT HAZARD CLASS: 2.1
US DOT PACKING GROUP: Not applicable

US DOT ID NUMBER: UN1030

15. REGULATORY INFORMATION

U. S. FEDERAL REGULATIONS:

TSCA Inventory Status: Reported/Included.

Title III Hazard classification sections 311,312

Acute:	Yes
Chronic:	No
Fire:	Yes
Reactivity:	No
Pressure:	Yes

Lists:

SARA Extremely Hazardous Substance	-No
CERCLA Hazardous Substance	-(*)
SARA Toxic Chemicals	-No

* See Disposal Information

HFC-152a is a flammable gas as defined by OSHA in 29CFR 1910.1200 (c). Use of this product may require compliance with 29CFR 1910.119, Process Safety Management of Highly Hazardous Chemicals.

16. OTHER INFORMATION

NFPA, NPCA-HIMS RATING

HMIS Classification: Health – 1, Flammability – 4, Reactivity – 1
Personal Protection Rating to be supplied by user depending on use conditions.

The data in this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.

17. DISCLAIMER

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