



MATERIAL SAFETY DATA SHEET

3/04



EFFECTIVE DATE: 11-11-83
REVISION NUMBER: 1

QUAKER STATE CORPORATION • P.O. Box 989, Oil City, Pennsylvania 16301.

I. IDENTIFICATION

PRODUCT NAME: Quaker State Refrigerant 12

CHEMICAL NAME: Dichlorodifluoromethane

FORMULA: CCl_2F_2

SYNONYMS: R-12, Freon-12

PRODUCT CODE: 67047 (QSRF12-14) 14 oz. AR.
67051 (QSRFKT-1) Recharge Kit
67048 (QSRF12-30) 30 lb. Cyl.

CHEMICAL FAMILY: Fluorocarbon

DEPARTMENT OF HAZARD CLASSIFICATION: Non-Flammable Gas

TRANSPORTATION: SHIPPING NAME: Dichlorodifluoromethane IDENTIFICATION #: UN 1028

CAS #: DP-23-00-1

CAS NAME: Freon 12

II. TYPICAL COMPOSITION

MATERIAL	CAS #	% wt.	TLV (UNITS) (SOURCE)	HAZARD
Dichlorodifluoromethane	DP-23-00-1	100	1000 ppm (ACGIH) TWA	Inhalation, Eyes, Skin

III. PHYSICAL DATA

BOILING POINT, 760 mm. Hg: -21.6 F

PHYSICAL STATE: Liquid

SPECIFIC GRAVITY (H₂O = 1): 1.124

VAPOR PRESSURE AT 20°C.: 4893

VAPOR DENSITY (AIR = 1): 6.33

SOLUBILITY IN WATER, % BY WT.: 0.028

PER CENT VOLATILES BY VOLUME: 100

EVAPORATION RATE (Butyl Acetate = 1) 380 (Very Rapid)

APPEARANCE AND ODOR: Clear liquid, slight ethereal odor

This information is, to the best of Quaker State Corporation's knowledge and belief, accurate and reliable. However, no representation, warranty, or guarantee is made to its accuracy, reliability, or completeness. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use.

FOR FURTHER INFORMATION CALL: (814) 676-7676

IV. HEALTH HAZARD DATA

TLV AND SOURCE: 1000 PPM

ACUTE EFFECTS OF OVEREXPOSURE

SWALLOWING : Very unlikely

SKIN ABSORPTION: N/D

INHALATION : Light headedness, giddiness, shortness of breath. Possible cardiac arrhythmias at high concentrations.

SKIN CONTACT : Irritation, possible epidermal freezing

EYE CONTACT : Irritation

CHRONIC EFFECTS OF OVEREXPOSURE

None known

EMERGENCY AND FIRST AID PROCEDURES

SWALLOWING : Very unlikely.

SKIN : Flush with water, call a physician.

INHALATION : Remove to fresh air, call a physician.

EYES : Flush with water, call a physician.

NOTES TO PHYSICIAN

Following overexposure by inhalation, do not give Epinephrine or similar drugs.

V. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT [test method(s)]: Non-Flammable

FLAMMABLE LIMITS IN AIR, % BY VOLUME: N/A

EXTINGUISHING MEDIA: N/A

SPECIAL FIRE FIGHTING PROCEDURES: N/A

UNUSUAL FIRE AND EXPLOSION HAZARDS: N/A

VI. REACTIVITY DATA

STABILITY: Stable

CONDITIONS TO AVOID: Open flames or high temperatures

INCOMPATIBILITY (materials to avoid): None known

HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS: Hydrochloric & Hydrofluoric Acid, possibly Carbonyl Fluoride

HAZARDOUS POLYMERIZATION: Will not occur

CONDITIONS TO AVOID: None known

VII. SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

Ventilate area, especially low places where heavy vapor might collect. Stop flow of gas. Remove open flames since material decomposes when exposed to high temperatures.

WASTE DISPOSAL METHOD:

N/A

VIII. PERSONAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (specify type): Not applicable for intended use. See "Notes" page 4 for complete information.

VENTILATION: Normal general ventilation.

PROTECTIVE GLOVES: Since epidermal freezing is possible, thermal protection is recommended.

EYE PROTECTION: Safety goggles. * Contact lenses should not be worn when handling Freon under pressure.

OTHER PROTECTIVE EQUIPMENT: N/A

IX. SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Store containers in a clean dry area. Do not store above 130° F.

PRECAUTIONS DURING USE: Do not use material until manufacturer's recommendations have been read and completely understood.

Do not puncture or incinerate containers.

NOTES

RESPIRATORY PROTECTION FOR DICHLORODIFLUOROMETHANE

<u>Condition</u>	<u>Minimum Respiratory Protection* Required Above 1000 ppm</u>
Gas Concentration	
10,000 ppm or less	Any supplied-air respirator. Any self-contained breathing apparatus.
50,000 ppm or less	Any supplied-air respirator with a full facepiece, helmet, or hood. Any self-contained breathing apparatus with a full facepiece. A Type C supplied-air respirator with a half facepiece operated in pressure-demand or other positive pressure or continuous-flow mode.
Greater than 50,000 ppm or entry and escape from unknown concentrations	Self-contained breathing apparatus with a full facepiece operated in pressure-demand or other positive pressure mode. A combination respirator which includes a Type C supplied-air respirator with a full facepiece operated in pressure-demand or other positive pressure or continuous-flow mode and an auxiliary self-contained breathing apparatus operated in pressure-demand or other positive pressure mode.
Fire Fighting	Self-contained breathing apparatus with a full facepiece operated in pressure-demand or other positive pressure mode.
Escape	Any gas mask providing protection against organic vapors. Any escape self-contained breathing apparatus.

* Only NIOSH-approved or MSHA-approved equipment should be used.

Approved by D. W. Cralley - Corporate Safety Coordinator