



Advantus Corp.
12276 San Jose Blvd.
Jacksonville, FL 32223-8630
www.advantus.com

Material Safety Data Sheet

January, 2000
RR3700

SECTION 1: PRODUCT IDENTIFICATION AND EMERGENCY INFORMATION

PRODUCT (TRADE) NAME:
PRODUCT IDENTIFICATION NUMBER(S)
CHEMICAL NAME AND SYNONYMS:
CHEMICAL FORMULA:
EMERGENCY TELEPHONE NUMBERS:

SECTION 2: COMPOSITION AND INFORMATION ON INGREDIENTS

COMPONENT	CAS#	%	OSHA PEL	ACGIH TLV (ppm)
1,1-Difluoroethane	75-37-6	100	NE	NE

SECTION 3: HAZARDS IDENTIFICATION

Product is under pressure. Vapors may ignite. Do not expose to heat, open flame or temperatures above 120°F. Excessive or deliberate inhalation of vapors may be fatal. Skin irritant. Direct exposure to skin can cause frostbite. Use only with adequate ventilation

Carcinogenicity (OSHA/NTP/IARC/ACGIH):
Medical Conditions Aggravated by Exposure:

None Listed
Individuals with preexisting diseases of the CNS, cardiovascular system, lungs or kidneys may have increased susceptibility to excessive exposures. Due to possible disturbances of cardiac rhythm, special cautions should be used when administering catecholamines drugs, such as epinephrine.

SECTION 4: FIRST AID INFORMATION

EYE CONTACT: Immediately flush with water for 15 minutes. Call physician.
SKIN CONTACT: Immediately flush with water for 15 minutes. Treat for frostbite if necessary by gently warming affected area.
INHALATION: Immediately remove victim to fresh air. If not breathing give artificial respiration. Call physician immediately.
INGESTION: Not considered a possible route of exposure.

SECTION 5: FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (TCC): <-58°F
FLAMMABLE LIMITS (% BY VOLUME): LEL: 3.9 UEL: 16.9
AUTOIGNITION TEMPERATURE °F (°C): 849 (454)
EXTINGUISHING MEDIA: Dry chemical, carbon dioxide, alcohol foam. Water spray to cool containers.
UNUSUAL FIRE OR EXPLOSION HAZARDS: May produce hydrofluoric acid. SCBA may be required.

NFPA RATING: HEALTH (1)
FLAMMABILITY (4)
REACTIVITY (1)



SECTION 6: ACCIDENTAL RELEASE MEASURES

If spill or release of gas exceeds concentrations greater than 1000ppm, all ignition sources should be turned off or removed. Area should be evacuated and ventilated, especially in low places where vapors may accumulate.

SECTION 7: HANDLING AND STORAGE

Adequate ventilation should be maintained to limit employee exposure. Contact with liquid should be avoided. Product should be stored in a clean, dry area away from open flame, sparking equipment and temperatures above 120°F.

SECTION 8: EXPOSURE CONTROL - PERSONAL PROTECTION

Under normal conditions of use, normal ventilation should be adequate to control exposure and Personal Protection Equipment should not be necessary. If large amounts are used, as in an industrial application, local exhaust and mechanical ventilation may be required as well as Personal Protection Equipment such as impervious gloves, goggles and fire protective clothing with antistatic control.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT (°F(°C)):	-13 (-25)	% VOLATILE BY VOLUME @ 25°C:	100
VAPOR PRESSURE (psia @ 25°C):	87	EVAPORATION RATE (BUTYL ACETATE=1):	>1
VAPOR DENSITY (AIR=1):	2.4	FORM:	Compressed Gas
% SOLUBLE IN WATER @ 25°C:	<1	ODOR:	Slight Etheral
SPECIFIC GRAVITY (G/CC@25°C)	0.90 Liquid	APPEARANCE OF LIQUID:	Clear, Colorless

SECTION 10: STABILITY AND REACTIVITY

STABILITY:	Product is stable. It will however, degrade at elevated temperatures and when in contact with open flame.
HAZARDOUS POLYMERIZATION:	Will not occur.
INCOMPATIBILITIES/CONDITIONS TO AVOID:	Alkali or alkaline earth metals.
HAZARDOUS DECOMPOSITION PRODUCTS:	Hydrofluoric Acid and Carbonyl Fluoride

SECTION 11: TOXICOLOGICAL INFORMATION

Animal data available upon request.

SECTION 12: ECOLOGICAL INFORMATION

Not available.

SECTION 13: DISPOSAL CONSIDERATIONS

Follow Federal, State and Local regulations. This product may be a RCRA hazardous waste upon disposal due to ignitability characteristic.

SECTION 14: TRANSPORT INFORMATION

DOT CLASSIFICATION:

Proper Shipping Name:	1,1-Difluoroethane
Hazard Class:	2.1 (Flammable Gas)
UN Number:	UN1030
Packing Group:	Not Applicable
Hazard Labeling: Labels are required air shipments only.	Flammable Gas (Red) Cargo Aircraft Only (Orange)
DOT Exemption:	DOT-E 11516

IATA/ICAO CLASSIFICATION:

Proper Shipping Name:	1,1-Difluoroethane
Hazard Class:	2.1 (Flammable Gas)
UN Number:	UN1030
Packing Group:	Not Applicable
Hazard Labeling:	Flammable Gas (Red) and Cargo Aircraft Only (Orange)
DOT Exemption:	DOT-E 11516

IMDG CLASSIFICATION:

Proper Shipping Name:	1,1-Difluoroethane
Hazard Class:	2.1 (Flammable Gas)
IMDG Page#:	2132
Packing Group:	Not Applicable
Flash Point:	-25°C
Marine Pollutant:	No
DOT Exemption:	DOT-E 11516

SECTION 15: REGULATORY INFORMATION

SARA TITLE III REPORTING:

Toxic Chemical(Section 313):	Not Listed
Extremely Hazardous Substance (Section 302, 304, 311,312):	Not Listed
Hazard Class:	Chronic Health Acute Health Fire Hazard Pressure Hazard Reactivity Hazard
	Yes No Yes Yes No

TSCA INVENTORY STATUS:	Reported
-------------------------------	----------

SECTION 16: OTHER INFORMATION

The information provided herein is compiled from internal reports and data from professional publication. It is furnished without warranty of any kind, expressed or implied. It is intended solely to assist in evaluating suitability and proper use of the material and in implementing safety precautions and procedures. Employers should use this information as a supplement to other information gathered by them and must make independent determination of suitability and completeness of information from all sources to assure proper use of these materials. All information used must be determined by the user to be in accordance with applicable federal, state and local laws and regulations.

