

Stuffing Machine
3rd floor
MCD



Du Pont Chemicals

6001FR



Revised 04-Aug-92

Printed 14-Sep-92

"DYMEL" 134 α *

(DUST-A-WAY) - see *
below

MATERIAL IDENTIFICATION

Corporate Number DU005611

"DYMEL" is a registered trademark of Du Pont.

Manufacturer
Distributor

Dupont Chemicals
Neopost
P.O. Box 917, Union City, CA 94587

Phone Numbers

Product Information 1-800-441-9442
Transport Emergency CHEMTREC: 1-800-424-9300
Medical Emergency 1-800-441-3637

Chemical Family

HALOGENATED HYDROCARBON

Du Pont Registry Number

DP147-27-7

Formula

CH₂FCF₃

TSCA Inventory Status

Reported/Included

NPCA-HMIS Ratings

Health: 1
Flammability: 0
Reactivity: 1
Personal Protection rating to be supplied by user depending on use conditions.

COMPONENTS

Material	CAS Number	Percent
ETHANE, 1,1,1,2-TETRAFLUORO- ("DYMEL" 134a)	811-97-2	100

PHYSICAL DATA

Boiling Point	-26.2°C (-15.2°F) at 736 mm Hg.
Vapor Pressure	96 psia at 25 deg C (77 deg F)
Vapor Density	3.18 (Air = 1.0)

(continued)

* Distributed under the name "Dust-A-Way" by Neopost.

PHYSICAL DATA (continued)

% Volatiles	100 WT %
Water Solubility	0.15 WT % at 25°C (77°F) and 14.7 psia
Odor	Slight ethereal
Form	Liquefied gas
Color	Clear, colorless
Density	1.21 g/cc at 25 deg C (77 deg F) - Liquid

HAZARDOUS REACTIVITY

Instability	Material is stable. However, avoid open flames and high temperatures.
Incompatibility	Incompatible with alkali or alkaline earth metals- powdered Al, Zn, Be, etc.
Polymerization	Polymerization will not occur.
Decomposition	: Decomposition products are hazardous. "DYMEL" 134a can be decomposed by high temperatures (open flames, glowing metal surfaces, etc.) forming hydrofluoric acid, and possibly carbonyl fluoride.

FIRE AND EXPLOSION DATA

Flash Point	Will not burn
Method	TOC
Flammable Limits in Air, % by Volume	LEL Not applicable UEL Not applicable
Autoignition	>750°C (>1,382°F)
<p>"DYMEL" 134a is not flammable at ambient temperatures and atmospheric pressure. However, "DYMEL" 134a has been shown in tests to be combustible at pressures as low as 5.5 psig (at 177 deg C) when mixed with air at concentrations of generally more than 60 volume % air. At lower temperatures, higher pressures are required for combustibility. Experimental data have also been reported which indicate combustibility of "DYMEL" 134a in the presence of certain concentrations of chlorine.</p>	
Fire and Explosion Hazards	Cylinders may rupture under fire conditions. Decomposition may occur.
Extinguishing Media	As appropriate for combustibles in area.
Special Fire Fighting Instructions	Cool cylinders with water spray. Self-contained breathing apparatus (SCBA) may be required if cylinders rupture or release under fire conditions.

(continued)

HEALTH HAZARD INFORMATION

Inhalation of high concentrations of vapor is harmful and may cause heart irregularities, unconsciousness or death. Intentional misuse or deliberate inhalation may cause death without warning. Vapor reduces oxygen available for breathing and is heavier than air. Liquid contact can cause frostbite.

ANIMAL DATA:

Inhalation 4-hour ALC: 567,000 ppm in rats

The compound is untested for skin and eye irritancy, and is untested for animal sensitization. No toxic effects were seen in animals from exposures by inhalation to concentrations up to 81,000 ppm. Lethargy and rapid respiration were observed at a vapor concentration of 205,000 ppm and pulmonary congestion, edema, and central nervous system effects occurred at a vapor concentration of 750,000 ppm. Cardiac sensitization occurred in dogs at 75,000 ppm from the action of exogenous epinephrine. No effects in animals occurred from repeated inhalation exposure to 99,000 ppm for two weeks or to 50,000 ppm for three months. No adverse effects were observed in male and female rats fed 300 mg/kg/day of "DYMEL" 134a for 52 weeks. Animal testing indicates that this compound does not have carcinogenic or mutagenic effects. Embryotoxic activity has been observed in some animal tests but only at maternally toxic dose levels.

HUMAN HEALTH EFFECTS:

Human health effects of overexposure by inhalation to very high concentrations may cause temporary alteration of the heart's electrical activity with irregular pulse, palpitations, or inadequate circulation. Skin contact with the liquid may cause frostbite.

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

Carcinogenicity	None of the components in this material is listed by IARC, NTP, OSHA, or ACGIH as a carcinogen.
------------------------	---

Applicable Exposure Limits

ETHANE, 1,1,1,2-TETRAFLUORO- ("DYMEL" 134a)	
AEL * (Du Pont)	1000 ppm, (8 & 12 hr TWA)
TLV (ACGIH)	None Established
PEL (OSHA)	None Established

* AEL is Du Pont's Acceptable Exposure Limit. Where governmentally imposed occupational exposure limits which are lower than the AEL are in effect, such limits shall take precedence.

Safety Precautions

Avoid contact with eyes. Avoid contact with skin.

Avoid breathing vapors. Use with sufficient ventilation to keep employee exposure below recommended limits. "DYMEL" 134a should not be mixed with air for leak testing or used with air for any other purpose above atmospheric pressure. Contact with chlorine or other strong oxidizing agents should also be avoided.

(continued)

FIRST AID

INHALATION

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

SKIN CONTACT

In case of contact, immediately flush skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician. Treat for frostbite if necessary by gently warming affected area. Wash contaminated clothing before reuse.

EYE CONTACT

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

INGESTION

If swallowed, ingestion is not considered a potential route of exposure.

Notes to Physician

Because of possible disturbances of cardiac rhythm, catecholamine drugs, such as epinephrine, should be considered only as a last resort in life-threatening emergencies.

PROTECTION INFORMATION

Generally Applicable Control Measures and Precautions

Normal ventilation for standard manufacturing procedures is generally adequate. Local exhaust should be used when large amounts are released. Mechanical ventilation should be used in low or enclosed places.

Personal Protective Equipment

Impervious gloves and chemical splash goggles should be used when handling liquid. 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.

DISPOSAL INFORMATION

Spill, Leak, or Release

NOTE: Review FIRE AND EXPLOSION HAZARDS and SAFETY PRECAUTIONS before proceeding with clean up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean up.

Ventilate area, especially low or enclosed places where heavy vapors might collect. Remove open flames. Use self-contained breathing apparatus (SCBA) if large spill or leak occurs.

Waste Disposal

Contaminated "DYMEL" 134a can be recovered by distillation or removed to a permitted waste disposal facility. Comply with Federal, State, and local regulations.

(continued)

SHIPPING INFORMATION

DOT

Proper Shipping Name	REFRIGERANT GAS, N.O.S. (TETRAFLUOROETHANE)
Hazard Class	NONFLAMMABLE GAS
UN/NA No.	UN 1078

DOT/IMO

Proper Shipping Name	REFRIGERANT GAS, N.O.S. (TETRAFLUOROETHANE)
Hazard Class	2.2
UN No.	1078
DOT/IMO Label	NONFLAMMABLE GAS
Shipping Containers	Tank Car Tank Truck Cylinders Ton Tanks

STORAGE CONDITIONS

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

TITLE III HAZARD CLASSIFICATIONS

Acute	Yes
Chronic	No
Fire	No
Reactivity	No
Pressure	Yes

LISTS:

Extremely Hazardous Substance	-No
CERCLA Hazardous Substance	-No
Toxic Chemicals	-No

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.

Responsibility for MSDS:

W. J. Brock
Du Pont Chemicals
P. O. Box 80709, Chestnut Run
Wilmington, DE 19880-0709

Indicates updated section.

End of MSDS