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DU PONT

Handwritten: Airbrush Kit 1-1
492045

1971
IDENTIFICATION

MATERIAL SAFETY DATA SHEET

Pressure Tank (Sample #IKI 9-7476)

NAME
DYMEL[®] 22/DYMEL[®] A Aerosol
Propellant Blends

GRADE
Aerosol

FORMULA
CHClF₂/CH₃OCH₃

MANUFACTURER/DISTRIBUTOR
E. I. du Pont de Nemours & Co. (Inc.)

ADDRESS
Wilmington, DE 19898

CHEMICAL FAMILY
Halogenated Hydrocarbon/
Ether Blends

2200179
492045

TSCA INVENTORY STATUS
Reported/Included

SARA/TITLE III STATUS
See ADDITIONAL INFORMATION Section

PRODUCT INFORMATION PHONE
(800) 441-9450

MEDICAL EMERGENCY PHONE
(800) 441-3637

TRANSPORTATION EMERGENCY PHONE
CHEMTREC (800) 424-9300

PHYSICAL DATA

Composition wt.% DYMEL [®] 22	DYMEL [®] A	Liquid Density g/cc at 25°C (77°F)	Vapor Pressure psig at 25°C (77°F)	Vapor Density (Air = 1)	Boiling Point °C °F	
90	10	1.105	111.3	2.85	-38.0	-36.4
80	20	1.029	90.3	2.71	-35.2	-31.4
70	30	0.961	75.8	2.57	-33.8	-28.9
60	40	0.903	68.3	2.43	-29.6	-21.4
50	50	0.850	65.0	2.29	-26.9	-16.4
40	60	0.805	63.8	2.15	-24.1	-11.4
30	70	0.763	65.8	2.01	-21.3	-6.4
20	80	0.726	68.8	1.87	-18.6	-1.4
10	90	0.692	71.7	1.73	-16.3	3.6

PERCENT VOLATILE BY VOLUME
100

FORM
Liquefied gas

COLOR
Colorless

SOLUBILITY IN WATER
0.3 to 7.3 wt % at 25°C (77°F)

APPEARANCE
Clear

ODOR
Slight ethereal

*Reg. U.S. Pat. & Tm. Off., Du Pont Company. DYMEL[®] 22 and DYMEL[®] A Aerosol Propellants are made only by Du Pont.

H-02921-1 Date: 5/89

49-2045a

HAZARDOUS COMPONENTS

<u>MATERIAL(S)</u>	<u>CAS NO.</u>	<u>APPROXIMATE %</u>
Methane, Chlorodifluoro (DYMEL ^R 22)	75-45-6	90-10
Dimethyl Ether (DYMEL ^R A)	115-10-6	10-90

HAZARDOUS REACTIVITY

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

INCOMPATIBILITY
Alkali or alkaline earth metals—powdered Al, Zn, Be, etc.

DECOMPOSITION
The components of these blends can be decomposed by high temperatures (open flames, glowing metal surfaces, etc.) forming hydrochloric and hydrofluoric acids.

POLYMERIZATION
Will not occur.

FIRE AND EXPLOSION DATA

FLASH POINT
Not determined

FLAMMABLE LIMITS IN AIR, % BY VOL.
Blends containing more than 9.5 wt % of dimethyl ether are flammable when vaporized in air.

AUTOIGNITION TEMPERATURE
Not determined

AUTODECOMPOSITION TEMPERATURE
Not determined

FIRE AND EXPLOSION HAZARDS
Cylinders are equipped with pressure and temperature relief devices but still may rupture under fire conditions. Explosion is possible. Decomposition may occur.

EXTINGUISHING MEDIA
CO₂, dry chemical, "alcohol" foam, Halon 1301.

SPECIAL FIREFIGHTING 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 conditions.

49-20456

HEALTH HAZARD INFORMATION

PRINCIPAL HEALTH HAZARDS (Including Significant Routes, Effects, Symptoms of Overexposure, and Medical Conditions Aggravated by Exposure)

Inhalation of high concentrations of vapor is harmful and may cause heart irregularities, unconsciousness, or death. Intentional misuse can be fatal. Vapor reduces oxygen available for breathing and is heavier than air. Liquid contact can cause frostbite.

DYMEL[®] 22

Inhalation 4-hour LC₅₀: 220,000 ppm in rats

The compound is untested for skin and eye irritancy, and is untested for animal sensitization. Toxicity described in animals exposed by inhalation to concentrations ranging from 5% to 70% includes effects on the central nervous system, liver, lungs, kidneys, spleen; cardiac sensitization; decreased body weight gain; and partial anesthesia. In chronic inhalation studies, DYMEL[®] 22 produced a small, but statistically significant, increase of tumors in male rats, but not female rats or male or female mice, at a concentration of 50,000 ppm (v/v). In the same studies, no carcinogenic effects were seen in either species at concentrations of 10,000 ppm or 1000 ppm (v/v). DYMEL[®] 22 was mutagenic in bacterial cell cultures but not mammalian cell cultures, and was not mutagenic in whole animal assays. A slight, but significant, increase in developmental toxicity (eye malformations, decreased fetal weights) has been observed in the offspring of rats exposed to high concentrations (50,000 ppm) of DYMEL[®] 22, a concentration which was also maternally toxic; no effects on the fetus or the maternal rats were seen at 1000 or 100 ppm. Developmental toxicity studies in rabbits at 50,000, 1000 and 100 ppm DYMEL[®] 22 were negative. Studies of the effects of DYMEL[®] 22 on male reproductive performance have been negative. Specific studies to evaluate the effect on female reproductive performance have not been conducted; however, limited information obtained from studies on developmental toxicity do not indicate adverse effects on female reproductive performance at concentrations up to 50,000 ppm (v/v).

Human health effects of overexposure to the vapors by inhalation may include temporary nervous system depression with anaesthetic effects such as dizziness, headache, confusion, incoordination, and loss of consciousness. Higher exposures to the vapors may cause temporary alteration of the heart's electrical activity with irregular pulse, palpitations, or inadequate circulation; or fatality from gross overexposure. 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.

DYMEL[®] A

Inhalation 4-hour LC₅₀: 164,000 ppm in rats

The compound is untested for skin and eye irritancy, and is untested for animal sensitization. Toxicity described in animals exposed by inhalation to concentrations at or above 10,000 ppm includes anaesthetic effects, depression of arterial blood pressure, changes in blood cell counts, increases in relative body/organ weight ratios for liver, spleen and testes and weight gain suppression. Cardiac sensitization occurred in dogs exposed to concentrations of 20% and greater. Tests in animals demonstrate no carcinogenic or developmental toxicity. The compound does not produce genetic damage in bacterial cell cultures.

49-2045d

PROTECTION INFORMATION

GENERALLY APPLICABLE CONTROL MEASURES

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 places. Ground all equipment and cylinders before use. Use explosion-proof electrical equipment rated Class I, Group C in Division 1 locations. In Division 2 locations, all spark-producing electrical equipment must be explosion-proof and rated Class I, Group C. Non-sparking motors need not be explosion-proof. Although DME is not prone to peroxide formation, equipment should be clean and dry and purged with nitrogen before putting into service.

PERSONAL PROTECTIVE EQUIPMENT

Lined rubber 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 is required if a large spill or release occurs.

DISPOSAL INFORMATION

SPILL, LEAK OR RELEASE

Keep upwind of leak. Evacuate the area until gas has dispersed. Wear self-contained breathing apparatus (SCBA) for large spills or leaks.

This material is an ICR (ignitable, corrosive, reactive) substance under CERCLA. A release of 100 lbs. may trigger the reporting requirements of CERCLA Section 103.

WASTE DISPOSAL

Use a disposal contractor. Comply with Federal, State, and local regulations.

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

SHIPPING INFORMATION

<u>DOT (172.101)</u>	<u><9.5% Dimethyl Ether</u>	<u>>9.5% Dimethyl Ether</u>
PROPER SHIPPING NAME	Dispersant Gas, N.O.S. (Chlorodifluoromethane/Dimethyl ether)	Dispersant Gas, N.O.S. (Chlorodifluoromethane/Dimethyl ether)
HAZARD CLASS	Nonflammable Gas	Flammable Gas
UN NO.	UN 1078	NA 1954
DOT LABEL	Nonflammable Gas	Flammable Gas
DOT PLACARD	Nonflammable Gas	Flammable Gas

49-2045e

SHIPPING INFORMATION (cont'd)

DOT/IMO (172.102)

PROPER SHIPPING NAME	Refrigerant Gas, N.O.S. (Chlorodifluoromethane/ Dimethyl ether)	Refrigerant Gas, N.O.S. (Chlorodifluoromethane/ Dimethyl ether)
HAZARD CLASS	Nonflammable Gas, 2.2	Flammable Gas, 2.1
SUBSIDIARY RISK		
UN NO.	1078	1954
IMO/ICAO LABEL	Nonflammable Gas	Flammable Gas

For any blend with <50% DYMEL[®] 22 the shipping information is as follows:

	<u>DOT (172.101)</u>	<u>DOT/IMO (172.102)</u>
PROPER SHIPPING NAME	Compressed Gas, N.O.S. (Chlorodifluoromethane/ Dimethyl ether)	Compressed Gases, Flammable, N.O.S. same
HAZARD CLASS	Flammable Gas	Flammable Gas, 2.1
UN/NA NUMBER	UN 1954	UN 1954
LABEL	Flammable Gas	Flammable Gas

SHIPPING CONTAINERS

Cylinders, ton tanks, tank trucks, tank cars.

49-2045f

ADDITIONAL INFORMATION

STORAGE CONDITIONS

Clean, dry area. Do not heat above 52°C (125°F). Store away from oxygen cylinders, other oxidizing materials and possible ignition sources.

NPCA-HMIS RATINGS

Health 1
Flammability 4
Reactivity 1
Personal Protection -

Personal Protection rating to be supplied by user depending on use conditions.

SARA/TITLE III HAZARD CATEGORIES AND LISTS

Product Hazard Categories:

Chronic Health - No
Acute Health - Yes
Fire Hazard - Yes
Pressure Hazard - Yes
Reactivity Hazard - No

Lists:

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

DATE OF LATEST REVISION/REVIEW:
PERSON RESPONSIBLE FOR MSDS:

5/89
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Chestnut Run Plaza
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