

U.S. DEPARTMENT OF LABOR  
Occupational Safety & Health Administration  
**MATERIAL SAFETY DATA SHEET**

SECTION I			
MANUFACTURER'S NAME <b>E. I. DuPont de Nemours and Company, Inc.</b>		EMERGENCY TELEPHONE NO. <b>(302)-774-2421</b>	
ADDRESS (Number, Street, City, State, and ZIP Code) <b>Freon® Products Division, Wilmington, Delaware 19898</b>			
CHEMICAL NAME AND SYNONYMS <b>Dichlorodifluoromethane + *</b>		TRADE NAME AND SYNONYMS <b>Freon® 12 with Dytel®*</b>	
CHEMICAL FAMILY <b>Halogenated Hydrocarbon + Dye</b>		FORMULA <b>CCl<sub>2</sub>F<sub>2</sub> + *</b>	

SECTION II HAZARDOUS INGREDIENTS					
PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
* <b>PIGMENTS - (p-dodecylanilino) anthraquinone</b>		<b>0.025</b>	<b>BASE METAL</b>		
<b>CATALYST</b>			<b>ALLOYS</b>		
<b>VEHICLE</b>			<b>METALLIC COATINGS</b>		
<b>SOLVENTS</b>			<b>FILLER METAL PLUS COATING OR CORE FLUX</b>		
<b>ADDITIVES</b>			<b>OTHERS</b>		
<b>OTHERS</b>					
HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES				%	TLV (Units)
<b>Note: The TLV for the dye has not been determined, but the addition of such a small percentage of solid is not expected to significantly change the properties of Freon® 12.</b>					

SECTION III PHYSICAL DATA			
BOILING POINT (°F.)	-21.6	SPECIFIC GRAVITY (H <sub>2</sub> O = 1) 77°F	1.31
VAPOR PRESSURE (mm Hg.) 77°F psia	94.5	PERCENT VOLATILE BY VOLUME (%)	99.075
VAPOR DENSITY (AIR = 1) 77°F	4.3	EVAPORATION RATE (n-butyl acetate = 1)	Rapid
SOLUBILITY IN WATER 77°F, % by wt.	0.02	Molecular Weight	120.92
APPEARANCE AND ODOR <b>Red liquid - slight ethereal odor</b>			

SECTION IV FIRE AND EXPLOSION HAZARD DATA			
FLASH POINT (Method used)	None	FLAMMABLE LIMITS	<div style="display: flex; justify-content: space-between;"> <span>LeI</span> <span>UeI</span> </div>
EXTINGUISHING MEDIA			
SPECIAL FIRE FIGHTING PROCEDURES <b>Nonflammable</b>			
UNUSUAL FIRE AND EXPLOSION HAZARDS <b>Usually shipped and stored as a liquefied compressed gas under pressure.</b>			

**NOTICE FROM DU PONT**

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.

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SECTION V HEALTH HAZARD DATA	
THRESHOLD LIMIT VALUE	1000 PPM
EFFECTS OF OVEREXPOSURE Light-headedness, giddiness, shortness of breath, possible narcosis, possible cardiac arrhythmias at high concentrations.	
EMERGENCY AND FIRST AID PROCEDURES Inhalation: Remove to fresh air, call a physician. Do not give epinephrine or similar drugs.	
Skin or Eye Contact: Flush with water	

SECTION VI REACTIVITY DATA			
STABILITY	UNSTABLE		CONDITIONS TO AVOID Open flames or high temperatures
	STABLE	X	
INCOMPATIBILITY (Materials to avoid) Alkali or alkaline earth metals - powdered Aluminum, Zinc, Beryllium, etc.			
HAZARDOUS DECOMPOSITION PRODUCTS Hydrochloric and hydrofluoric acids - possible carbonyl fluoride.			
HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	

SECTION VII SPILL OR LEAK PROCEDURES	
STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED	
Ventilate area-especially low places where heavy vapors might collect.	
WASTE DISPOSAL METHOD	Reclaim by distillation

SECTION VIII SPECIAL PROTECTION INFORMATION			
RESPIRATORY PROTECTION (Specify type) Use air mask with independent supply in high concentrations			
VENTILATION	LOCAL EXHAUST When large amounts are released	SPECIAL	
	MECHANICAL (General) Especially in low places	OTHER	
PROTECTIVE GLOVES When handling liquid		EYE PROTECTION When handling liquid	
OTHER PROTECTIVE EQUIPMENT			

SECTION IX SPECIAL PRECAUTIONS	
PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING Store containers in a clean, dry area. Do not heat above 125°F.	
OTHER PRECAUTIONS For further information, see Freon® Products Laboratory Bulletin S-16.	