

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

Form Approved
OMB No. 44-R1387

MATERIAL SAFETY DATA SHEET

000057

Required under USDL Safety and Health Regulations for Ship Repairing,
Shipbuilding, and Shipbreaking (29 CFR 1915, 1916, 1917)

SECTION I

MANUFACTURER'S NAME ATOCHEM, groupe elf aquitaine In the U.S. contact - ATOCHEM U.S.A., INC.		EMERGENCY TELEPHONE NO. 201-652-8575
ADDRESS (Number, Street, City, State, and ZIP Code) 13 Sunflower Avenue, Paramus, New Jersey 07652		
CHEMICAL NAME AND SYNONYMS BROMOCHLORODIFLUOROMETHANE; HALON 1211		TRADE NAME AND SYNONYMS PYROFORANE 1211
CHEMICAL FAMILY HALOGENATED HYDROCARBONS (HALONS)	FORMULA CF₂ClBr	

SECTION II - HAZARDOUS INGREDIENTS - NONE

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS			BASE-METAL		
CATALYST			ALLOYS		
VEHICLE			METALLIC COATINGS		
SOLVENTS			FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS		
OTHERS					
HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES				%	TLV (Units)

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)	39	SPECIFIC GRAVITY (H ₂ O=1) at 68°F	1.815
VAPOR PRESSURE (mm Hg.) at 68°F	1758	PERCENT VOLATILE BY VOLUME (%)	
VAPOR DENSITY (AIR=1) at 68°F Under 750 mmHg	5.93	EVAPORATION RATE (_____ =1)	liquified gas
SOLUBILITY IN WATER	non-miscible		
APPEARANCE AND ODOR Slight ethereal odor; colorless			

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	Nonflammable product	FLAMMABLE LIMITS	N/A	Lel	Uel
EXTINGUISHING MEDIA	Fire extinguishing agent (itself)				
SPECIAL FIRE FIGHTING PROCEDURES					
UNUSUAL FIRE AND EXPLOSION HAZARDS					

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE
EFFECTS OF OVEREXPOSURE VAPOR EXPOSURE: no trouble observed at concentrations below 20,000ppm. At higher concentrations, nervous troubles and possible trouble of cardiac rhythm.
EMERGENCY AND FIRST AID PROCEDURES Liquified product; EYE CONTACT: Immediately wash with large amounts of water. Call an opthamologist. SKIN CONTACT: frostbite, treat as a burn. INHALATION OF VAPOR: Remove to fresh air. Call a physician.

SECTION VI - REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	XX	
INCOMPATABILITY (Materials to avoid) NONE			
HAZARDOUS DECOMPOSITION PRODUCTS THERMAL DECOMPOSITION ABOVE 850°F GIVES TOXIC FUMES (HYDROHALOGENATED ACIDS)			
HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	XX	

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED IN A CLOSED AREA: ventilate or wear a self-contained breathing apparatus risk of intoxication)
WASTE DISPOSAL METHOD NONE

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (Specify type)		
VENTILATION	LOCAL EXHAUST	SPECIAL
	MECHANICAL (General)	OTHER
PROTECTIVE GLOVES When handling liquified gas.		EYE PROTECTION Wear chemical safety goggles.
OTHER PROTECTIVE EQUIPMENT		

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING Store at a temperature below 122°F in a well-ventilated area protected from sources of ignition (motors, welding equipment...)
OTHER PRECAUTIONS Storage and handling precautions as applicable to liquified gases under pressure. (filling ratio : 0.88)