

MCMULLEN OIL PRODUCTS INC -- MCCOOL CHILL-IT REFRIGERANT-X 4 SUBSTITUTE (GHG-X 4),  
112737 -- 6830-01-433-7032

===== Product Identification =====

Product ID:MCCOOL CHILL-IT REFRIGERANT-X 4 SUBSTITUTE (GHG-X 4), 112737

MSDS Date:05/01/1997

FSC:6830

NIIN:01-433-7032

MSDS Number: CFRKV

=== Responsible Party ===

Company Name:MCMULLEN OIL PRODUCTS INC

Address:11965 49TH STREET N

City:CLEARWATER

State:FL

ZIP:34622

Country:US

Info Phone Num:800-669-5730/813-573-0016

Emergency Phone Num:800-669-5730/535-5053

CAGE:0Z1X2

=== Contractor Identification ===

Company Name:C F C RECLAMATION AND RECYCLING SERVICE INC

Address:318 N TREADAWAY

Box:560

City:ABILENE

State:TX

ZIP:79604

Country:US

Phone:9150-675-5311 FAX: 915-675-5324

CAGE:0XXK5

Company Name:MCCOOL PRODUCTS INC

Address:25410 CORTEZ BLVD

Box:City:BROOKSVILLE

State:FL

ZIP:34601-7838

Country:US

Phone:888-512-2166

CAGE:0Z1X2

===== Composi

tion/Information on Ingredients =====

Ingred Name:ISOBUTANE (R-600A)  
CAS:75-28-5  
RTECS #:TZ4300000  
Fraction by Wt: 4%  
Other REC Limits:1000 PPM (MFR)

Ingred Name:CHLORODIFLUOROETHANE/1-CHLORO-1,1 DIFLUOROETHANE (SARA 313)  
(R-142B)  
CAS:75-68-3  
RTECS #:KH7650000  
Fraction by Wt: 16.5%  
Other REC Limits:1000 PPM (MFR)  
Ozone Depleting Chemical:2

Ingred Name:CHLOROTETRAFLUOROETHANE/1-CHLORO-1,2,2,2-TETRAFLUOROETHANE  
(SARA 313) (R-124)  
CAS:2837-89-0  
Fraction by Wt: 28.5%  
Other REC  
Limits:NONE RECOMMENDED

Ingred Name:CHLORODIFLUOROMETHANE (SARA 313) (CERCLA) (R22)  
CAS:75-45-6  
RTECS #:PA6390000  
Fraction by Wt: 51%  
Other REC Limits:NONE RECOMMENDED  
OSHA PEL:1000 PPM  
ACGIH TLV:1000 PPM; 9596  
Ozone Depleting Chemical:2

===== Hazards Identification =====

LD50 LC50 Mixture:TWA RECOMMENDED: 1000 PPM  
Routes of Entry: Inhalation:YES Skin:NO Ingestion:NO  
Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO  
Health Hazards Acute and Chronic:TARGE  
T ORGANS:EYE, SKIN, CNS,  
RESPIRATORY TRACT, HEART. ACUTE- OVEREXPOSURE BY INHALATION TO VERY  
HIGH CONCENTRATIONS MAY CAUSE HEART IRREGULARITIES, SHORTNESS OF  
BREATH, NARCOSIS, UNCONSCIOUSNESS OR DEATH. LIQUID  
CONTACT/ESCAPING VAPORS CAN CAUSE EYE AND SKIN FROSTBITE. INGESTION  
IS NOT LIKELY (GAS). CHRONIC- UNKNOWN.  
Explanation of Carcinogenicity:NO INGREDIENT OF A CONCENTRATION OF 0.1%  
OR GREATER IS LISTED AS A CARCINOGEN BY IARC, NTP OR OSHA.  
Effects of Overexposure:FROS

TBITE, ASPHYXIATION, IRRITATION, HEART  
IRREGULARITIES, SHORTNESS OF BREATH, HEADACHE, UNCONSCIOUSNESS,  
DEATH.

Medical Cond Aggravated by Exposure:INDIVIDUALS WITH PRE-EXISTING  
DISEASES OF THE CENTRAL NERVOUS SYSTEM OR CARDIOVASCULAR SYSTEM MAY  
HAVE INCREASED SUSCEPTIBILITY TO THE TOXICITY OF EXCESSIVE  
EXPOSURES.

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===== First Aid Measures =====

First Aid:EYE:FLUSH WITH WATER FOR 15 MINUTES. HOLD EYELIDS OPEN. GET  
IMMEDIATE MEDICAL ATT  
ENTION. SKIN:FLUSH WITH WATER FOR 15 MINUTES.  
TREAT FOR FROSTBITE BY SLOWLY WARMING UP THE EXPOSED AREA. CALL  
PHYSICIAN . INHALED:MOVE TO FRESH AIR. PROVIDE CPR/OXYGEN IF  
NECESSARY. CALL A PHYSICIAN. ORAL:INGESTION IS NOT CONSIDERED A  
POTENTIAL ROUTE OF EXPOSURE.

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===== Fire Fighting Measures =====

Flash Point:NONE

Extinguishing Media:WATER SPRAY. USE WATER SPRAY TO COOL FIRE EXPOSED  
CYLINDERS. IF OIL MIST IS LEAKED FROM CYLINDER, CAN BE VER

Y

FLAMMABLE.

Fire Fighting Procedures:WEAR FULL PROTECTIVE CLOTHING AND NIOSH-  
APPROVED SELF-CONTAINED BREATHING APPARATUS WITH FULL FACEPIECE  
OPERATED IN THE POSITIVE PRESSURE MODE.

Unusual Fire/Explosion Hazard:CYLINDERS MAY RUPTURE. DECOMPOSITION MAY  
OCCUR FORMING TOXIC GASES. MAY BE FLAMMABLE IF MIXED WITH LARGE  
QUANTITIES OF AIR AT GREATER THAN ATMOSPHERIC PRESSURE.

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===== Accidental Release Measures =====

Spill Release Procedures:WEAR PROTEC  
TIVE EQUIPMENT. VENTILATE AREA

ESPECIALLY LOW OR ENCLOSED PLACES WHERE HEAVY VAPORS MIGHT COLLECT.  
REMOVE OPEN FLAMES. CLOSE VALVES OR STOP LEAK IF IT IS SAFELY  
POSSIBLE TO DO SO. SPILLS AN D RELEASES MAY HAVE TO BE REPORTED TO  
AUTHORITIES.

Neutralizing Agent:NONE SPECIFIED BY MANUFACTURER.

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===== Handling and Storage =====

Handling and Storage Precautions:STORE IN COOL, VENTILATED, DRY AREA  
AWAY FROM DIRECT SUNLIGHT, FLAMES AND INCOMPATIBL

E MATERIALS.

PROTECT CYLINDERS AGAINST PHYSICAL DAMAGE.

Other Precautions:AVOID BREATHING VAPORS. AVOID EYE OR SKIN CONTACT.  
WASH WITH SOAP AND WATER BEFORE EATING OR DRINKING. USE WITH  
ADEQUATE VENTILATION. KEEP OUT OF REACH OF CHILDREN. DO NOT VENT TO  
THE ATMOSPHERE. CONTAINS SUBSTANCES WHICH HARM ENVIRONMENT.

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===== Exposure Controls/Personal Protection =====

Respiratory Protection:NOT NORMALLY REQUIRED. WEAR NIOSH-APPROVED SELF-  
CONTAINED BREATHING APP

ARATUS OPERATED IN POSITIVE PRESSURE MODE OR  
SUPPLIED-AIR RESPIRATOR IF A LARGE RELEASE OCCURS.

Ventilation:NORMAL VENTILATION. LOCAL EXHAUST NEEDED WHEN LARGE AMOUNTS  
ARE RELEASED.

Protective Gloves:LINED BUTYL WHEN HANDLING LIQUID

Eye Protection:CHEMICAL SPLASH GOGGLES WHEN HANDLE LIQ.

Other Protective Equipment:EYEBATH, SAFETY SHOWER, PROTECTIVE CLOTHING

Work Hygienic Practices:OBSERVE GOOD PERSONAL HYGIENE PRACTICES AND  
RECOMMENDED PROCEDURES.

Supplemental Safety and Health

NOTE

TO PHYSICIAN: CONTAINS HALOGENATED GASES. INCREASED CARDIAC  
SENSITIVITY AND POSSIBLE ARRHYTHMIA MAY RESULT FROM OVEREXPOSURE.  
DO NOT ADMINISTER EPINEPHRINE OR OTHER STIMULATING DRUGS FOLLOWING  
OV EREXPOSURE UNLESS ABSOLUTELY NECESSARY.NO SPECIFIC ANTIDOTE.  
SUPPORTIVE CARE. TREATMENT BASED ON DOCTOR'S JUDGEMENT.

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===== Physical/Chemical Properties =====

HCC:G3

Boiling Pt:B.P. Text:-26F,-32C

Decomp Temp:Decomp Text:>400F,>204C

Vapor Pres:4912 @ 70F

Vapo

r Density:1.4

Spec Gravity:1.36 LIQUID 70F

Evaporation Rate & Reference:NOT RELEVANT (GAS)

Solubility in Water:SLIGHT

Appearance and Odor:COLORLESS LIQUEFIED GAS - FAINT ETHEREAL ODOR

Percent Volatiles by Volume:100

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===== Stability and Reactivity Data =====

Stability Indicator/Materials to Avoid:YES

STRONG OXIDIZING AGENTS INCLUDING OXYGEN, FRESHLY SCRAPED ALUMINUM,  
ALKALI METALS AND ALKALI EARTH METALS (NA, MG, ETC.)

Stability Condition to Avoid:AVOID OPEN FL

AMES AND HIGH TEMPERATURES.

Hazardous Decomposition Products: CARBON MONOXIDE, CARBON DIOXIDE,  
HYDROGEN FLUORIDE, HYDROGEN CHLORIDE, CHLORINE, FLORINE, PHOSGENE,  
CARBONYL HALIDES

Conditions to Avoid Polymerization: WILL NOT OCCUR.

===== Disposal Considerations =====

Waste Disposal Methods: DISPOSE OF IN ACCORDANCE WITH LOCAL, STATE AND  
FEDERAL REGULATIONS. DO NOT ATTEMPT TO DISPOSE OF RESIDUAL OR  
UNUSED QUANTITIES. RETURN IN THE SHIPPING CONTAINER P

ROPERLY

LABELED, WITH ANY VALVE OR CAP S SECURED TO YOUR SUPPLIER, IF  
POSSIBLE.

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