

ITEM: 2W198 - Refrigerant R-22 30 lb.**SDS: D5062****ORDER: 0171767217****LP NUMBER: U877624005****SAFETY DATA SHEET (SDS)****This SDS should be attached or kept with the respective product with which it is associated.**

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SDS - D5062

Associated Grainger Items
2W198, 2W199ARKEMA
INNOVATIVE CHEMISTRY

SAFETY DATA SHEET

FORANE(R*) 22

1. PRODUCT AND COMPANY IDENTIFICATIONCOMPANY:
ARKEMA INC.
900 FIRST AVENUE
KING OF PRUSSIA, PENNSYLVANIA 19406

FLUOROchemicals

CUSTOMER SERVICE TELEPHONE NUMBER: (800) 245-5858
(MONDAY THROUGH FRIDAY, 8:00 AM TO 5:00 PM EST)**EMERGENCY INFORMATION:**TRANSPORTATION:
CHEMTREC: (800) 424-9300
(24 HRS., 7 DAYS A WEEK)MEDICAL:
ROCKY MOUNTAIN POISON CENTER: (866) 767-5089
(24 HRS., 7 DAYS A WEEK)**PRODUCT INFORMATION:**

PRODUCT NAME: FORANE(R*) 22

SYNONYMS: R-22, HCFC-22

MOLECULAR FORMULA: CHClF₂

CHEMICAL FAMILY: HYDROCHLOROFLUOROCARBON

PRODUCT USE: REFRIGERANT

2. HAZARDS IDENTIFICATION**EMERGENCY OVERVIEW:**

COLOR: CLEAR - COLOURLESS

PHYSICAL STATE: GASEOUS

FORM: LIQUEFIED GAS

ODOR: SLIGHTLY ETHER-LIKE

*CLASSIFICATION OF THE SUBSTANCE OR MIXTURE:
GASES UNDER PRESSURE, LIQUEFIED GAS, H280
SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE, CATEGORY 3, H336
HAZARDOUS TO THE OZONE LAYER, CATEGORY 1, H420*FOR THE FULL TEXT OF THE H-STATEMENTS MENTIONED IN THIS SECTION, SEE
SECTION 16.**GHS-LABELING:**HAZARD PICTOGRAMS:
GAS CYLINDER
EXCLAMATION MARK

SIGNAL WORD: WARNING

HAZARD STATEMENTS:

H280: CONTAINS GAS UNDER PRESSURE; MAY EXPLODE IF HEATED.

H336: MAY CAUSE DROWSINESS OR DIZZINESS.

H420:
HARMS PUBLIC HEALTH AND THE ENVIRONMENT BY DESTROYING OZONE IN THE UPPER
ATMOSPHERE.SUPPLEMENTAL HAZARD STATEMENTS:
OVERHEATING OR OVER PRESSURIZING MAY CAUSE GAS RELEASE OR VIOLENT CYLINDER
BURSTING. MAY DECOMPOSE ON CONTACT WITH FLAMES OR EXTREMELY HOT METAL
SURFACES TO PRODUCE TOXIC AND CORROSIVE PRODUCTS. VAPOR REDUCES OXYGEN
AVAILABLE FOR BREATHING AND IS HEAVIER THAN AIR. PROLONGED OR REPEATED
CONTACT MAY DRY SKIN AND CAUSE IRRITATION. MAY CAUSE FROSTBITE. MAY CAUSE
EFFECTS ON: HEART**PRECAUTIONARY STATEMENTS:**PREVENTION:
P261: AVOID BREATHING GAS/MIST/VAPOURS/SPRAY.
P271: USE ONLY OUTDOORS OR IN A WELL-VENTILATED AREA.**RESPONSE:**

P304 + P340:

IF INHALED:
REMOVE VICTIM TO FRESH AIR AND KEEP AT REST IN A POSITION COMFORTABLE FOR
BREATHING.

P312: CALL A POISON CENTER OR DOCTOR/PHYSICIAN IF YOU FEEL UNWELL.

STORAGE:

P403 + P233:

STORE IN A WELL-VENTILATED PLACE. KEEP CONTAINER TIGHTLY CLOSED.

P405: STORE LOCKED UP.

P410: PROTECT FROM SUNLIGHT.

DISPOSAL:P501: DISPOSE OF CONTENTS/CONTAINER TO AN APPROVED WASTE DISPOSAL PLANT.
P502: REFER TO MANUFACTURER/SUPPLIER FOR INFORMATION ON RECOVERY/RECYCLING.**SUPPLEMENTAL INFORMATION:****POTENTIAL HEALTH EFFECTS:****LIQUID:**

CONTACT WITH LIQUID OR REFRIGERATED GAS CAN CAUSE COLD BURNS AND FROSTBITE.

VAPOR:VAPOR IS HEAVIER THAN AIR AND CAN CAUSE SUFFOCATION BY REDUCING OXYGEN
AVAILABLE FOR BREATHING.**IF INHALED:****CENTRAL NERVOUS SYSTEM EFFECTS:**

HEADACHE, NAUSEA, DIZZINESS, DROWSINESS, LOSS OF CONSCIOUSNESS.

STRESS INDUCED HEART EFFECTS:INHALATION MAY CAUSE AN INCREASE IN THE SENSITIVITY OF THE HEART TO
ADRENALINE, WHICH COULD RESULT IN IRREGULAR OR RAPID HEARTBEATS AND REDUCED
HEART FUNCTION.**MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:**

HEART DISEASE OR COMPROMISED HEART FUNCTION.

3. COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL NAME	CAS-NO.	WT/WT	GHS CLASSIFICATION**
METHANE, CHLORODIFLUORO-	75-45-6	100%	H280, H420

**FOR THE FULL TEXT OF THE H-STATEMENTS MENTIONED IN THIS SECTION, SEE
SECTION 16.**4. FIRST AID MEASURES****INHALATION:**IF INHALED, REMOVE VICTIM TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL
RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN. GET MEDICAL ATTENTION.**SKIN:**IF ON SKIN, FLUSH EXPOSED SKIN WITH LUKEWARM WATER (NOT HOT), OR USE OTHER
MEANS TO WARM SKIN SLOWLY. REMOVE CONTAMINATED CLOTHING AND SHOES. GET
MEDICAL ATTENTION IF FROSTBITTEN BY LIQUID OR IF IRRITATION OCCURS. WASH
CLOTHING BEFORE REUSE. THOROUGHLY CLEAN SHOES BEFORE REUSE.**EYES:**IMMEDIATELY FLUSH EYE(S) WITH PLENTY OF WATER. GET MEDICAL ATTENTION IF
IRRITATION PERSISTS.**INGESTION:**

INGESTION IS NOT APPLICABLE - PRODUCT IS A GAS AT AMBIENT TEMPERATURES.

NOTES TO PHYSICIAN: DO NOT GIVE DRUGS FROM ADRENALINE-EPHEDRINE GROUP.

5. FIREFIGHTING MEASURES**EXTINGUISHING MEDIA (SUITABLE):**

USE EXTINGUISHING MEASURES TO SUIT SURROUNDINGS.

PROTECTIVE EQUIPMENT:FIRE FIGHTERS AND OTHERS WHO MAY BE EXPOSED TO PRODUCTS OF COMBUSTION
SHOULD WEAR FULL FIRE FIGHTING TURN OUT GEAR (FULL BUNKER GEAR) AND
SELF-CONTAINED BREATHING APPARATUS (PRESSURE DEMAND / NIOSH APPROVED OR
EQUIVALENT).**FURTHER FIREFIGHTING ADVICE:**

FIGHT FIRE WITH LARGE AMOUNTS OF WATER FROM A SAFE DISTANCE.

STOP THE FLOW OF GAS IF POSSIBLE.

WATER MIST SHOULD BE USED TO REDUCE VAPOR CONCENTRATIONS IN AIR.

COOL CLOSED CONTAINERS EXPOSED TO FIRE WITH WATER SPRAY.

CLOSED CONTAINERS OF THIS MATERIAL MAY EXPLODE WHEN SUBJECTED TO HEAT FROM
SURROUNDING FIRE.AFTER A FIRE, WAIT UNTIL THE MATERIAL HAS COOLED TO ROOM TEMPERATURE BEFORE
INITIATING CLEAN-UP ACTIVITIES.

FIRE FIGHTING EQUIPMENT SHOULD BE THOROUGHLY DECONTAMINATED AFTER USE.

FIRE AND EXPLOSION HAZARDS:MAY DECOMPOSE ON CONTACT WITH FLAMES OR EXTREMELY HOT METAL SURFACES TO
PRODUCE TOXIC AND CORROSIVE PRODUCTS.LIQUID AND GAS UNDER PRESSURE, OVERHEATING OR OVER PRESSURIZING MAY CAUSE
GAS RELEASE AND/OR VIOLENT CYLINDER BURSTING.

CONTAINER MAY EXPLODE IF HEATED DUE TO RESULTING PRESSURE RISE.

SOME MIXTURES OF HCFCs AND/OR HFCs, AND AIR OR OXYGEN MAY BE COMBUSTIBLE IF
PRESSURIZED AND EXPOSED TO EXTREME HEAT OR FLAME.

WHEN BURNED, THE FOLLOWING HAZARDOUS PRODUCTS OF COMBUSTION CAN OCCUR:
HYDROGEN FLUORIDE
HYDROGEN CHLORIDE
CARBON OXIDES
CARBONYL HALIDES

6. ACCIDENTAL RELEASE MEASURES

IN CASE OF SPILL OR LEAK:

ELIMINATE ALL IGNITION SOURCES. EVACUATE AREA OF ALL UNNECESSARY PERSONNEL. USE HALOGEN LEAK DETECTOR OR OTHER SUITABLE MEANS TO LOCATE LEAKS OR CHECK ATMOSPHERE. PREVENT FURTHER LEAKAGE OR SPILLAGE IF YOU CAN DO SO WITHOUT RISK. KEEP UPWIND. EVACUATE ENCLOSED SPACES AND DISPERSE GAS WITH FLOOR-LEVEL FORCED-AIR VENTILATION. AVOID BREATHING LEAKED MATERIAL. CONSULT A REGULATORY SPECIALIST TO DETERMINE APPROPRIATE STATE OR LOCAL REPORTING REQUIREMENTS, FOR ASSISTANCE IN WASTE CHARACTERIZATION AND/OR HAZARDOUS WASTE DISPOSAL AND OTHER REQUIREMENTS LISTED IN PERTINENT ENVIRONMENTAL PERMITS.

7. HANDLING AND STORAGE

HANDLING:

GENERAL INFORMATION ON HANDLING:

KEEP AWAY FROM HEAT, SPARKS AND FLAMES.

AVOID CONTACT WITH SKIN, EYES AND CLOTHING.

AVOID BREATHING GAS.

KEEP CONTAINER CLOSED.

USE ONLY WITH ADEQUATE VENTILATION.

WASH THOROUGHLY AFTER HANDLING.

DO NOT ENTER CONFINED SPACES UNLESS ADEQUATELY VENTILATED.

USE EQUIPMENT RATED FOR CYLINDER PRESSURE.

CLOSE VALVE AFTER EACH USE AND WHEN EMPTY.

EMPTIED CONTAINER RETAINS VAPOR AND PRODUCT RESIDUE.

OBSERVE ALL LABELED SAFEGUARDS UNTIL CONTAINER IS CLEANED, RECONDITIONED OR DESTROYED.

STORAGE:

GENERAL INFORMATION ON STORAGE CONDITIONS:

STORE IN WELL VENTILATED AREA AWAY FROM HEAT, DIRECT SUNLIGHT AND SOURCES OF IGNITION SUCH AS FLAME, SPARKS AND STATIC ELECTRICITY.

STORAGE STABILITY - REMARKS:

DO NOT APPLY DIRECT FLAME TO CYLINDER. DO NOT STORE CYLINDER IN DIRECT SUN OR EXPOSE IT TO HEAT ABOVE 120 F (48.9 C.).

DO NOT DROP OR REFILL THIS CYLINDER.

STORAGE INCOMPATIBILITY - GENERAL:

STORE SEPARATE FROM: ALKALINE EARTH METALS
FINELY DIVIDED METALS (ALUMINIUM, MAGNESIUM, ZINC...)
STRONG OXIDIZING AGENTS
ALKALI METALS
STRONG BASES

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

AIRBORNE EXPOSURE GUIDELINES:

METHANE, CHLORODIFLUORO- (75-45-6):

US. ACGIH THRESHOLD LIMIT VALUES:

TIME WEIGHTED AVERAGE: 1,000 PPM

ONLY THOSE COMPONENTS WITH EXPOSURE LIMITS ARE PRINTED IN THIS SECTION. LIMITS WITH SKIN CONTACT DESIGNATION ABOVE HAVE SKIN CONTACT EFFECT. AIR SAMPLING ALONE IS INSUFFICIENT TO ACCURATELY QUANTITATE EXPOSURE. MEASURES TO PREVENT SIGNIFICANT CUTANEOUS ABSORPTION MAY BE REQUIRED. LIMITS WITH A SENSITIZER DESIGNATION ABOVE MEAN THAT EXPOSURE TO THIS MATERIAL MAY CAUSE ALLERGIC REACTIONS.

ENGINEERING CONTROLS:

INVESTIGATE ENGINEERING TECHNIQUES TO REDUCE EXPOSURES BELOW AIRBORNE EXPOSURE LIMITS OR TO OTHERWISE REDUCE EXPOSURES. PROVIDE VENTILATION IF NECESSARY TO MINIMIZE EXPOSURES OR TO CONTROL EXPOSURE LEVELS TO BELOW AIRBORNE EXPOSURE LIMITS (IF APPLICABLE SEE ABOVE). IF PRACTICAL, USE LOCAL MECHANICAL EXHAUST VENTILATION AT SOURCES OF AIR CONTAMINATION SUCH AS OPEN PROCESS EQUIPMENT.

MONITOR CARBON MONOXIDE AND OXYGEN LEVELS IN TANKS AND ENCLOSED SPACES. CONSULT ACGIH VENTILATION MANUAL, NFPA STANDARD 91 AND NFPA STANDARD 654 FOR DESIGN OF EXHAUST SYSTEM AND SAFE HANDLING.

RESPIRATORY PROTECTION:

AVOID BREATHING GAS. WHERE AIRBORNE EXPOSURE IS LIKELY OR AIRBORNE EXPOSURE LIMITS ARE EXCEEDED (IF APPLICABLE, SEE ABOVE), USE NIOSH APPROVED RESPIRATORY PROTECTION EQUIPMENT APPROPRIATE TO THE MATERIAL AND/OR ITS COMPONENTS (FULL FACEPIECE RECOMMENDED). CONSULT RESPIRATOR MANUFACTURER TO DETERMINE APPROPRIATE TYPE EQUIPMENT FOR A GIVEN APPLICATION. OBSERVE RESPIRATOR USE LIMITATIONS SPECIFIED BY NIOSH OR THE MANUFACTURER. FOR EMERGENCY AND OTHER CONDITIONS WHERE THERE MAY BE A POTENTIAL FOR SIGNIFICANT EXPOSURE OR WHERE EXPOSURE LIMIT MAY BE SIGNIFICANTLY EXCEEDED, USE AN APPROVED FULL FACE POSITIVE-PRESSURE, SELF-CONTAINED BREATHING APPARATUS OR POSITIVE-PRESSURE AIRLINE WITH AUXILIARY SELF-CONTAINED AIR SUPPLY. RESPIRATORY PROTECTION PROGRAMS MUST COMPLY WITH 29 CFR SUBSECTION 1910.134.

SKIN PROTECTION:

WEAR APPROPRIATE CHEMICAL RESISTANT PROTECTIVE CLOTHING AND CHEMICAL RESISTANT GLOVES TO PREVENT SKIN CONTACT. CONSULT GLOVE MANUFACTURER TO DETERMINE APPROPRIATE TYPE GLOVE MATERIAL FOR GIVEN APPLICATION. RINSE IMMEDIATELY IF SKIN IS CONTAMINATED. WASH CONTAMINATED CLOTHING AND CLEAN PROTECTIVE EQUIPMENT BEFORE REUSE. WASH THOROUGHLY AFTER HANDLING.

EYE PROTECTION: USE GOOD INDUSTRIAL PRACTICE TO AVOID EYE CONTACT.

9. PHYSICAL AND CHEMICAL PROPERTIES

COLOR: CLEAR - COLOURLESS

PHYSICAL STATE: GASEOUS

FORM: LIQUEFIED GAS

ODOR: SLIGHTLY ETHER-LIKE

ODOR THRESHOLD: NO DATA AVAILABLE

FLASH POINT: NOT APPLICABLE

AUTO-IGNITION TEMPERATURE: 1,170 DEG. F (632 DEG. C)

LOWER FLAMMABLE LIMIT (LFL): 13%(V) NONE.

UPPER FLAMMABLE LIMIT (UFL): NONE.

PH: NOT APPLICABLE

DENSITY: 1.19 G/CM3 (77 DEG. F (25 DEG. C))

VAPOR PRESSURE: 7,033 MMHg (77 DEG. F (25 DEG. C))

VAPOR DENSITY: 3.00 KG/M3

EVAPORATION RATE: NO DATA AVAILABLE

SOLUBILITY IN WATER: SLIGHTLY SOLUBLE

OIL/WATER PARTITION COEFFICIENT: NO DATA AVAILABLE

THERMAL DECOMPOSITION: NO DATA AVAILABLE

FLAMMABILITY: SEE GHS CLASSIFICATION IN SECTION 2

10. STABILITY AND REACTIVITY

STABILITY:

THIS MATERIAL IS CHEMICALLY STABLE UNDER NORMAL AND ANTICIPATED STORAGE, HANDLING AND PROCESSING CONDITIONS.

MATERIALS TO AVOID:

ALKALINE EARTH METALS
FINELY DIVIDED METALS (ALUMINIUM, MAGNESIUM, ZINC...)
STRONG OXIDIZING AGENTS
ALKALI METALS
STRONG BASES

CONDITIONS / HAZARDS TO AVOID: HEAT

HAZARDOUS DECOMPOSITION PRODUCTS:

THERMAL DECOMPOSITION GIVING TOXIC AND CORROSIVE PRODUCTS:

HYDROGEN CHLORIDE
HYDROGEN FLUORIDE
CARBON OXIDES
CARBONYL HALIDES

11. TOXICOLOGICAL INFORMATION

DATA FOR FORANE(R*) 22

ACUTE TOXICITY:

INHALATION: PRACTICALLY NONTOXIC. (RAT) 4 H LC50 220000 PPM. (GAS)

SKIN IRRITATION:

PRACTICALLY NON-IRRITATING. (RABBIT) (RAPID EVAPORATION OF THE LIQUID MAY CAUSE FROSTBITE.)

EYE IRRITATION:

CAUSES MILD EYE IRRITATION. (RABBIT) (30 S) SIGNS: RAPID EVAPORATION OF THE LIQUID MAY CAUSE FROSTBITE (GAS SPRAY)

SENSITIZATION:

CAUSES CARDIAC SENSITIZATION. (DOG, RAT, MOUSE, RABBIT AND MONKEY) SIGNS: IRREGULAR HEART BEAT, RAPID HEART BEAT, IN SOME CASES, SUDDEN DEATH

SKIN SENSITIZATION:

NOT A SENSITIZER. REPEATED SKIN EXPOSURE. (GUINEA PIG) NO SKIN ALLERGY WAS OBSERVED

REPEATED DOSE TOXICITY:

CHRONIC INHALATION ADMINISTRATION TO RAT, MOUSE / NO ADVERSE SYSTEMIC EFFECTS REPORTED.

CHRONIC ORAL ADMINISTRATION TO RAT / NO ADVERSE SYSTEMIC EFFECTS REPORTED.

CARCINOGENICITY:

CHRONIC INHALATION ADMINISTRATION TO MICE / SIGNS: NO INCREASE IN TUMOR INCIDENCE WAS REPORTED.

CHRONIC INHALATION ADMINISTRATION TO FEMALE RAT / SIGNS: NO INCREASE IN TUMOR INCIDENCE WAS REPORTED.

CHRONIC INHALATION ADMINISTRATION TO MALE RAT / AFFECTED ORGAN(S):

SALIVARY GLAND / SIGNS: INCREASED INCIDENCE OF TUMORS WAS REPORTED. / (NOT CONSIDERED RELEVANT TO HUMANS)

GENOTOXICITY:

ASSESSMENT IN VITRO:

GENETIC CHANGES WERE OBSERVED IN LABORATORY TESTS USING: BACTERIA

NO GENETIC CHANGES WERE OBSERVED IN LABORATORY TESTS USING: ANIMAL CELLS, YEAST

ASSESSMENT IN VIVO:
NO GENETIC CHANGES WERE OBSERVED IN LABORATORY TESTS USING: MICE

DEVELOPMENTAL TOXICITY:

EXPOSURE DURING PREGNANCY. INHALATION (RAT) / BIRTH DEFECTS WERE OBSERVED.
(EYE)

EXPOSURE DURING PREGNANCY. INHALATION (RABBIT) / NO BIRTH DEFECTS WERE
OBSERVED.

REPRODUCTIVE EFFECTS:

REPRODUCTION TEST. INHALATION (RAT AND MOUSE) / NO TOXICITY TO REPRODUCTION
/ (MALES)

HUMAN EXPERIENCE:

INHALATION:

LUNG: ASPHYXIA, SUFFOCATION.

HEART: PALPITATION. (BASED ON REPORTS OF OCCUPATIONAL EXPOSURE TO WORKERS)

SKIN CONTACT:

SKIN: IRRITATION, REDNESS, SWELLING. (REPEATED OR PROLONGED EXPOSURE)

12. ECOLOGICAL INFORMATION

CHEMICAL FATE AND PATHWAY:
DATA ON THIS MATERIAL AND/OR A SIMILAR MATERIAL ARE SUMMARIZED BELOW.

DATA FOR FORANE(R*) 22

BIODEGRADATION:

NOT READILY BIODEGRADABLE. (28 D) BIODEGRADATION 0%

OCTANOL WATER PARTITION COEFFICIENT:

LOG POW = 1.08 (PRACTICALLY NO POTENTIAL TO BIOACCUMULATE.)

PHOTODEGRADATION:

HALF-LIFE DIRECT PHOTOLYSIS: = 8.4 Y

MOBILITY AND DISTRIBUTION IN THE ENVIRONMENT:

MODERATE ADSORPTION / LOG KOC = 1.8

GLOBAL WARMING POTENTIAL:

GWP 1,810 (GLOBAL WARMING POTENTIAL WITH RESPECT TO CO₂ (TIME HORIZON 100
YEARS))

GWP 0.33 (HALOCARBON GLOBAL WARMING POTENTIAL; HGWP; (R-11 = 1))

OZONE DEPLETION POTENTIAL:

ODP 0.055 (OZONE DEPLETION POTENTIAL; ODP; (R-11 = 1))

ECOTOXICOLOGY:

DATA ON THIS MATERIAL AND/OR A SIMILAR MATERIAL ARE SUMMARIZED BELOW.

DATA FOR FORANE(R*) 22

AQUATIC TOXICITY DATA:

PRACTICALLY NONTOXIC. BRACHYDANIO RERIO (ZEBRAFISH) 96 H LC₅₀ = 777 MG/L

AQUATIC INVERTEBRATES:

PRACTICALLY NONTOXIC. DAPHNIA MAGNA (WATER FLEA) 48 H EC₅₀ = 433 MG/L

MICROORGANISMS:

BACTERIA 24 H TOXICITY THRESHOLD >400 MG/L (UNDER ANAEROBIC CONDITIONS)

13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL:

DO NOT VENT THE CONTAINER CONTENTS, OR PRODUCT RESIDUALS, TO THE
ATMOSPHERE. RECOVER AND RECLAIM UNUSED CONTENTS OR RESIDUALS AS
APPROPRIATE. RECOVERED/RECLAIMED PRODUCT CAN BE RETURNED TO AN APPROVED
CERTIFIED RECLAIMER OR BACK TO THE SELLER DEPENDING ON THE MATERIAL.
COMPLETELY EMPTIED DISPOSABLE CONTAINERS CAN BE DISPOSED OF AS RECYCLABLE
STEEL. RETURNABLE CYLINDERS MUST BE RETURNED TO SELLER. DISPOSE OF IN
ACCORDANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS. CONSULT A REGULATORY
SPECIALIST TO DETERMINE APPROPRIATE STATE OR LOCAL REPORTING REQUIREMENTS,
FOR ASSISTANCE IN WASTE CHARACTERIZATION AND/OR HAZARDOUS WASTE DISPOSAL
AND OTHER REQUIREMENTS LISTED IN PERTINENT ENVIRONMENTAL PERMITS.

NOTE:

CHEMICAL ADDITIONS TO, PROCESSING OF, OR OTHERWISE ALTERING THIS MATERIAL
MAY MAKE THIS WASTE MANAGEMENT INFORMATION INCOMPLETE, INACCURATE, OR
OTHERWISE INAPPROPRIATE. FURTHERMORE, STATE AND LOCAL WASTE DISPOSAL
REQUIREMENTS MAY BE MORE RESTRICTIVE OR OTHERWISE DIFFERENT FROM FEDERAL
LAWS AND REGULATIONS.

14. TRANSPORT INFORMATION

US DEPARTMENT OF TRANSPORTATION (DOT):

UN NUMBER: 1018

PROPER SHIPPING NAME: CHLORODIFLUOROMETHANE (REFRIGERANT GAS R 22)

CLASS: 2.2

MARINE POLLUTANT: NO

INTERNATIONAL MARITIME DANGEROUS GOODS CODE (IMDG):

UN NUMBER: 1018

PROPER SHIPPING NAME: CHLORODIFLUOROMETHANE (REFRIGERANT GAS R 22)

CLASS: 2.2

MARINE POLLUTANT: NO

15. REGULATORY INFORMATION

CHEMICAL INVENTORY STATUS:

EU. EINECS	EINECS	CONFORMS TO
US. TOXIC SUBSTANCES CONTROL ACT	TSCA THE COMPONENTS OF THIS PRODUCT ARE ALL ON THE TSCA INVENTORY.	
AUSTRALIA. INDUSTRIAL CHEMICAL (NOTIFICATION AND ASSESSMENT) ACT	AICS	CONFORMS TO
CANADA. CANADIAN ENVIRONMENTAL	DSL	ALL COMPONENTS OF THIS

PROTECTION ACT (CEPA). DOMESTIC
SUBSTANCES LIST (DSL)

PRODUCT ARE ON THE CANADIAN
DSL.

JAPAN. KASHIN-HOU LAW LIST ENCS (JP) DOES NOT CONFORM

KOREA. EXISTING CHEMICALS KECI (KR) CONFORMS TO
INVENTORY (KECI)

PHILIPPINES. THE TOXIC SUBSTANCES PICCS (PH) CONFORMS TO
AND HAZARDOUS AND NUCLEAR WASTE
CONTROL ACT

CHINA. INVENTORY OF EXISTING IECS (CN) CONFORMS TO
CHEMICAL SUBSTANCES

UNITED STATES - FEDERAL REGULATIONS:

SARA TITLE III - SECTION 302 EXTREMELY HAZARDOUS CHEMICALS:
THE COMPONENTS IN THIS PRODUCT ARE EITHER NOT SARA SECTION 302 REGULATED OR
REGULATED BUT PRESENT IN NEGLIGIBLE CONCENTRATIONS.

SARA TITLE III - SECTION 311/312 HAZARD CATEGORIES:
ACUTE HEALTH HAZARD, SUDDEN RELEASE OF PRESSURE HAZARD

SARA TITLE III - SECTION 313 TOXIC CHEMICALS:

CHEMICAL NAME	CAS-NO.	DE MINIMIS CONCENTRATION	REPORTABLE THRESHOLD:
METHANE, CHLORODIFLUORO-	75-45-6	1.0%	25000 LBS (MANUFACTURING AND PROCESSING) 10000 LBS (OTHERWISE USED (NON-MANUFACTURING/ PROCESSING))

COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT
(CERCLA) - REPORTABLE QUANTITY (RQ):
THE COMPONENTS IN THIS PRODUCT ARE EITHER NOT CERCLA REGULATED, REGULATED
BUT PRESENT IN NEGLIGIBLE CONCENTRATIONS, OR REGULATED WITH NO ASSIGNED
REPORTABLE QUANTITY.

UNITED STATES - STATE REGULATIONS:

NEW JERSEY RIGHT TO KNOW:

CHEMICAL NAME	CAS-NO.
METHANE, CHLORODIFLUORO-	75-45-6

PENNSYLVANIA RIGHT TO KNOW:

CHEMICAL NAME	CAS-NO.
METHANE, CHLORODIFLUORO-	75-45-6

PENNSYLVANIA RIGHT TO KNOW - ENVIRONMENTALLY HAZARDOUS SUBSTANCE(S):

CHEMICAL NAME	CAS-NO.
METHANE, CHLORODIFLUORO-	75-45-6

CALIFORNIA PROP. 65:

THIS PRODUCT DOES NOT CONTAIN ANY CHEMICALS KNOWN TO THE STATE OF
CALIFORNIA TO CAUSE CANCER, BIRTH DEFECTS, OR ANY OTHER REPRODUCTIVE
DEFECTS.

16. OTHER INFORMATION

FULL TEXT OF H-STATEMENTS REFERRED TO UNDER SECTIONS 2 AND 3.:

H280: CONTAINS GAS UNDER PRESSURE; MAY EXPLODE IF HEATED.

H336: MAY CAUSE DROWSINESS OR DIZZINESS.

H420:

HARMS PUBLIC HEALTH AND THE ENVIRONMENT BY DESTROYING OZONE IN THE UPPER
ATMOSPHERE.

LATEST REVISION(S):

REFERENCE NUMBER: 000000033818

DATE OF REVISION: 05/09/2015

DATE PRINTED: 05/09/2015

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SUCH PRODUCT IS USED IN COMBINATION WITH ANY OTHER MATERIALS OR IN ANY
PROCESS. FURTHER, SINCE THE CONDITIONS AND METHODS OF USE ARE BEYOND THE
CONTROL OF ARKEMA INC., ARKEMA INC. EXPRESSLY DISCLAIMS ANY AND ALL
LIABILITY AS TO ANY RESULTS OBTAINED OR ARISING FROM ANY USE OF THE PRODUCT
OR RELIANCE ON SUCH INFORMATION.

PRODUCT CODE: 04022

VERSION: 3.0

ISSUED ON: 05/09/2015

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