GRAINGER
FOR THE ONES WHO GET IT DONE

Close this window SDS

Common Name: FORANE 22
Manufacturer: ARKEMA
SDS Revision Date: 5/9/2015
SDS Format: GHS-US

Item Number(s): 2W198, 2W199
Manufacturer Model Number(s):

SDS Table of Contents

Click the desired link below to jump directly to that section in the SDS.

1. PRODUCT AND COMPANY IDENTIFICATION
2. HAZARDS IDENTIFICATION
3. COMPOSITION/INFORMATION ON INGREDIENTS
4. FIRST AID MEASURES
5. FIREFIGHTING MEASURES
6. ACCIDENTAL RELEASE MEASURES
7. HANDLING AND STORAGE
8. EXPOSURE CONTROLS/PERSONAL PROTECTION
9. PHYSICAL AND CHEMICAL PROPERTIES
10. STABILITY AND REACTIVITY
11. TOXICOLOGICAL INFORMATION
12. ECOLOGICAL INFORMATION
13. DISPOSAL CONSIDERATIONS
14. TRANSPORT INFORMATION
15. REGULATORY INFORMATION
16. OTHER INFORMATION

ARKEMA
INNOVATIVE CHEMISTRY

SAFETY DATA SHEET

FORANE(R*) 22

1. PRODUCT AND COMPANY IDENTIFICATION

top

COMPANY:
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: CHCIF2

CHEMICAL FAMILY: HYDROCHLOROFLUOROCARBON

PRODUCT USE: REFRIGERANT

2. HAZARDS IDENTIFICATION

top

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

top

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

top

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

top

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

top

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

top

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

top

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

top

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

top

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

top

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

top

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

top

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

top

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

top

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 PROTECTION ACT (CEPA). DOMESTIC SUBSTANCES LIST (DSL)	DSL	ALL COMPONENTS OF THIS PRODUCT ARE ON THE CANADIAN DSL.
JAPAN. KASHIN-HOU LAW LIST	ENCS (JP)	DOES NOT CONFORM
KOREA. EXISTING CHEMICALS INVENTORY (KECI)	KECI (KR)	CONFORMS TO
PHILIPPINES. THE TOXIC SUBSTANCES AND HAZARDOUS AND NUCLEAR WASTE CONTROL ACT	PICCS (PH)	CONFORMS TO
CHINA. INVENTORY OF EXISTING CHEMICAL SUBSTANCES	IECSC (CN)	CONFORMS TO

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

top

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

FORANE(R*) IS A REGISTERED TRADEMARK OF ARKEMA INC.

ARKEMA INC. BELIEVES THAT THE INFORMATION AND RECOMMENDATIONS CONTAINED HEREIN (INCLUDING DATA AND STATEMENTS) ARE ACCURATE AS OF THE DATE HEREOF. NO WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE, WARRANTY OF MERCHANTABILITY, OR ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, IS MADE CONCERNING THE INFORMATION PROVIDED HEREIN. THE INFORMATION PROVIDED HEREIN RELATES ONLY TO THE SPECIFIC PRODUCT DESIGNATED AND MAY NOT BE VALID WHERE 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

QUICK-FDS [17298-32559-27858-014085] - 2015-05-11 - 09:02:39