

HONEYWELL -- GENETRON 22 -- 6830-00-106-1659

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

Product ID:GENETRON 22
MSDS Date:01/01/2000
FSC:6830
NIIN:00-106-1659
Status Code:A
MSDS Number: CKWBX
=== Responsible Party ===
Company Name:HONEYWELL
Address:101 COLUMBIA ROAD
Box:1053
City:MORRISTOWN
State:NJ
ZIP:07962-1053
Country:US
Info Phone Num:800-707-4555
Emergency Phone Num:973-455-2000
Resp. Party Other MS
DS Num.:MSDS #: GTRN-0026
Chemtrec Ind/Phone:(800)424-9300
CAGE:UO139
=== Contractor Identification ===
Company Name:HONEYWELL
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Country:US
Phone:800-707-4555
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===== Composition/Information on Ingredients =====

Ingred Name:CHLORODIFLUOROMETHANE
CAS:75-45-6
RTECS #:PA6390000
Fraction by Wt: 100%
Other REC Limits:NONE SPECIFIED
OSHA PEL:1000 PPM
ACGIH TLV:1000PPM; 9192
Ozone Depleting Chemical:2

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

LD50 LC50 Mixture:NOT PROVIDED BY MANUFACTURER.

Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO

Health Hazards Acute and Chronic:SKIN: IRRITATION WOULD RESULT FROM A DEFATTING ACTION ON TISSUE. LIQUID CONTACT COULD CAUSE FROST-BITE. EYE: LIQUID CONTACT CAN CAUSE SEVERE IRRITATION & FROSTBITE. MIST MAY IRRITATE. INHALATION: GENT RON 22 IS LOW IN ACUTE TOXICITY IN AMINALS. WHEN OXYGEN LEVELS IN AIR ARE REDU

CED BY 12 TO 14 % BY

DISPLACEMENT, SYMPTOMS OF ASPHYXIATION, LOSS OF COORDINATION, INCREASED PULSE RATE & DEEPER RESPIRATI ON WILL OCCUR. AT HIGH LEVELS, CARDIAC ARRHYTHMIA MAY OCCUR. INGESTION: INGESTION IS UNLIKELY. SHOULD IT OCCUR, MAY CAUSE DISCOMFORT IN THE GASTROINTESTINAL TRACT, & EFFECTS SIMILAR TO INHALATION & SK IN WOULD BE EXPECTED.

Explanation of Carcinogenicity:PRODUCT CONTAINS NO MATERIALS CURRENTLY CLASSIFIED AS CARCINOGENIC BY NTP, IARC OR OSHA.

Effect

s of Overexposure:INHALATION: WHEN OXYGEN LEVELS ARE REDUCED TO 12-14%, LOSS OF COORDINATION, INCREASED PULSE RATE, AND DEEPER RESPIRATION. SKIN/EYES: FROSTBITE, INDICATED BY PALLOR OR REDNESS, LOSS OF SENSATION AND SW ELLING. INGESTION: GI DISCOMFORT.

Medical Cond Aggravated by Exposure:NONE SPECIFIED BY MANUFACTURER.

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

First Aid:SKIN: PROMPTLY FLUSH SKIN WITH WATER UNTIL ALL CHEMICAL IS REMOVED. IF THERE IS EV
IDNCE OF FROSTBITE, BATHE (DO NOT RUB) WITH
LUKEWARM (NOT HOT) WATER. IF WATER IS NOT AVAILABLE, COVER WITH A CLEAN, S OFT CLOTH OR SIMILAR COVERING. GET MEDICAL ATTENTION IF SYMPTOMS PERSIST. EYE: IMMEDIATELY FLUSH EYES WITH LARGE AMOUNTS OF WATER FOR AT LEAST 15 MINS (IN CASE OF FROSTBITE, WATER SHOULD BE LUKEWARM, NOT HOT) LIFTING EYELIDS OCCASSIONALLY TO FACILITATE IRRIGATION. GET MEDICAL ATTENTION OF SYMPTOMS PERSIST. INHALATION: IMMEDIATELY REMOVE TO FRESH AIR.

IF BREATHING HAS STOPPED, GIVE
ARTIFICIAL RESPIR ATION/ OXYGEN AS REQUIRED.

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

Flash Point:GAS, NOT APPLICA

Lower Limits:NONE

Upper Limits:NONE

Extinguishing Media:ANY STANDARD AGENT--CHOOSE THE ONE MOST SUITABLE FOR TYPE OF SURROUNDING FIRE. (MATERIAL ITSELF IS NOT FLAMMABLE).

Fire Fighting Procedures:FIREFIGHTERS SHOULD WEAR SELF CONTAINED, NIOSH-APPROVED BREATHING APPARATUS FOR PROTECTION AGAINST POSSIBLE TOXI

C DECOMPRESSION PRODUCTS. PROPER EYE & SKIN PROTECTION SHOULD BE PROVIDED. USE WATER SPRAY TO KEEP FIRE-EXPOSED CONTAINERS COOL. Unusual Fire/Explosion Hazard: GENETRON 22 IS NOT FLAMMABLE AT AMBIENT TEMPERATURES & ATMOSPHERIC PRESSURE. HOWEVER, THIS MATERIAL WILL BECOME COMBUSTIBLE WHEN MIXED WITH AIR UNDER PRESSURE & EXPOSED TO STRONG IGNITION SOURCES. CONTACT WITH CERTAIN REACTIVE METALS MAY RESULT IN FORMATION OF EXPLOSIVE OR EXOTHERMIC REACTIONS UNDER SPECIFIC CONDITIONS

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

Spill Release Procedures: EVACUATE UNPROTECTED PERSONNEL. PROTECTED PERSONNEL SHOULD REMOVE ANY IGNITION SOURCES & SHUT OFF LEAK, IF WITHOUT RISK, & PROVIDE VENTILATION. UNPROTECTED PERSONNEL SHOULD NOT RETURN UNTIL AIR HAS BEEN TESTED & DETERMINED SAFE, INCLUDING LOW-LYING AREAS. (ALWAYS WEAR RECOMMENDED PERSONAL PROTECTIVE EQUIPMENT). SPILLS & RELEASES MAY HAVE TO BE REPORTED TO FEDERAL &/OR LOCAL

AL AUTHORITIES.

Neutralizing Agent: NONE SPECIFIED BY MANUFACTURER.

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

Handling and Storage Precautions: AVOID BREATHING VAPORS & LIQUID CONTACT WITH EYES, SKIN OR CLOTHING. DO NOT PUNCTURE OR DROP CYLINDERS, EXPOSE THEM TO OPEN FLAME OR EXCESSIVE HEAT. USE AUTHORIZED CONTAINERS ONLY. FOLLOW STANDARD SAFETY PRECAUTIONS FOR HANDLING & USE OF COMPRESSED GAS CYLINDERS.

Other Precautions: GENETRON 22 SHOULD NOT BE MIXED WITH AIR ABOVE

ATMOSPHERIC PRESSURE FOR LEAK TESTING OR OTHER PURPOSES. USE &/OR ALTERATIONS TO THE PRODUCT SUCH AS MIXING WITH OTHER MATERIALS MAY ALTER THE RCRA CLASSIFICATION & THE PROPER DISPOSAL METHOD.

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

Respiratory Protection: NONE GENERALLY REQUIRED FOR ADEQUATELY VENTILATED WORK SITUATIONS. FOR ACCIDENTAL RELEASE OR NON-VENTILATED SITUATIONS, OR RELEASE INTO CONFINED SPACE (CONCENTRATION ABOVE

THE PEL OF 1,000 PPM), USE A SELF-CONTAINED
NIOSH-APPROVED BREATHING APARATUS OR SUPPLIED AIR RESPIRATOR. FOR
ESCAPE: USE THE FORMER OR NIOSH-APPROVED GAS MASK WITH ORGANIC
VAPOR CANISTER

Ventilation:PROVIDE LOCAL VENTILATION AT FILLING ZONES AND AREAS WHERE
LEAKAGE IS PROBABLE. MECHANICAL (GENERAL) VENTILATION MAY BE
ADEQUATE FOR OTHER OPERATING & STORAGE

Protective Gloves:PVA, NEOPRENE OR BUTYL RUBBER

Eye Protection:SAFETY GLASSES, CHEMICAL SAFETY GOGGLES

Other Protective

Equipment:IMPERVIOUS BOOTS AND CLOTHING. EYEWASH
STATIONS AND QUICK-DRENCH SHOWER FACILITIES.

Work Hygienic Practices:ANY CONTAMINATED CLOTHING SHOULD BE PROMPLY
REMOVED AND WASHED BEFORE REUSE

Supplemental Safety and Health

NOTE TO PHYSICIANS: DO NOT USE EPINEPHRINE (ADRENALINE).

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

HCC:G3

Boiling Pt:=-40.6C, -41.4F

Melt/Freeze Pt:=-160.C, -256.F

Decomp Temp:Decomp Text:NONE PROVIDED BY MFR.

Vapor Pres:136.1 PSIA @ 70 D

EG F

Vapor Density:3.0(AIR=1)

Spec Gravity:1.21 @21.1C (WATER=1)

pH:NEUTRAL

Viscosity:NONE PROVIDED BY MFR.

Evaporation Rate & Reference:>1 (CCL4=1)

Solubility in Water:0.3 WT%@25C AND 1 ATMOSPH

Appearance and Odor:CLEAR, COLORLESS LIQUID/(GAS @AMBIENT TEMP), FAINT
ETHEREAL ODOR

Percent Volatiles by Volume:100

Corrosion Rate:NONE PROVIDED BY MFR

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

Stability Indicator/Materials to Avoid:YES

UNDER SPECIFIC CONDITIONS; E.G.

VERY HIGH TEMPERATURES &/OR APPROPRIATE PRESSURE)-FRESHLY ABRADED ALUMINUM SURFACES (MAY CAUSE STRONG EXOTHERMIC REACTION). CHEMICALLY ACTIVE METALS: POTASSIUM, CALCIUM, POWDERED ALUMINUM, ME

Stability Condition to Avoid:DO NOT MIX WITH OXYGEN OR AIR ABOVE ATMOSPHERIC PRESSURE. ANY SOURCE OF HIGH TEMPERATURES, SUCH AS LIGHTED CIGARETTES, FLAMES, HOT SPOTS, OR WELDING.

Hazardous Decomposition Products:HALOGENS, HALOGEN ACIDS, & POSSIBLY CARBONYL HALIDES

Conditions to Avoi

d Polymerization:WILL NOT OCCUR.

===== Toxicological Information =====

Toxicological Information:LC50 4 HR RAT = />300,000 PPM. CARDIAC SENSITIZATION THRESHOLD (DOG) = 50,000 PPM. DELAYED OR SUBCHRONIC EFFECTS: INHALATION (RAT) NOEL= 50,000 PPM. NOT TERATOGENIC. NOT MUTAGENIC IN IN-VITRO OR IN-VIVO TESTS. LIFETIME EXPOSURE OF MALE RATS WAS ASSOCIATED WITH A SMALL INCREASE IN SALIVARY GLAND FIBROSARCOMAS.

===== Ecological Information =====

Ecological:DEGRADABILITY (BOD): GENETRON 22 IS A GAS AT ROOM TEMPERATURE, THEREFORE, IT IS UNLIKELY TO REMAIN IN WATER. OCTANOL WATER PARTITION COEFFECIENT: UNKNOWN.

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

Waste Disposal Methods:DISPOSAL MUST COMPLY WITH FEDERAL, STATE & LOCAL DISPOSAL OR DISCHARGE LAWS. GENETRON 22 IS SUBJECT TO U.S. EPA CLEAN AIR ACT REGULATIONS SECTION 608 IN 40 CFR PART 82 REGARDING REFRIGERANT RECYCLING. THE INFORMATION OFFERED HERE IS FOR THE PRODUCT AS SHIPPED.

===== MSDS Transport Information =====

Transport Information:US DOT PSN: CHLORODIFLUOROMETHANE (R-22), 2.2, UN1018.

===== Regulatory Information =====

SARA Title III Information:CERCLA RQ OR TPQ: NONE. SEC 311 HAZARD CLASS: IMMEDIATE AND PRESSURE. SARA SEC 313 TOXIC CHEMCIALS: CHLORODIFLUOROMETHANE (HCFC-22). GENETRON 22 IS SUBJECT TO U

S EPA

CLEAN AIR ACT REGULATIONS AT 40 CF R PART 82. WARNING! DO NOT VENT TO THE ATMOSPHERE. TO COMPLY WITH US CLEAN AIR ACT, ANY RESIDUAL MUST BE COVERED. CONTAINS CHLORODIFLUOROMETHANE, HCFC SUBSTANCE WHICH HARMS PUBLIC HEALTH & ENVIRONMENT BY DESTROYING OZONE IN THE UPPER ATMOSPHERE. DESTRUCTION OF OZONE LAYER CAN LEAD TO INCREASED ULTRAVIOLET RADIATION WHICH, WITH EXPOSURE TO SUNLIGHT, CAN LEAD TO INCREASE IN SKIN CANCER & EYE CATARACTS.

Federal Regulatory Information: TSCA INVENTORY STATUS: LISTED ON THE TSCA INVENTORY.

===== Other Information =====

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