

ALLIED SIGNAL INC, FLUOROCARBONS DIV -- GENETRON 12 -- 6830-00-264-5913

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

Product ID:GENETRON 12

MSDS Date:01/01/1997

FSC:6830

NIIN:00-264-5913

Status Code:A

MSDS Number: CKMMC

=== Responsible Party ===

Company Name:ALLIED SIGNAL INC, FLUOROCARBONS DIV

Address:101 COLUMBIA ROAD

Box:1053

City:MORRISTOWN

State:NJ

ZIP:07962-1053

Country:US

Info Phone Num:201-455-4157

/ 800-631-8138

Emergency Phone Num:201-455-2000

Resp. Party Other MSDS Num.:MSDS NUMBER: GTRN-0018

CAGE:05VM8

=== Contractor Identification ===

Company Name:ALLIED-SIGNAL INC

Address:101 COLUMBIA RD

Box:1053

City:MORRISTOWN

State:NJ

ZIP:07962-1053

Country:US

Phone:201-455-4157/201-455-2000

CAGE:05VM8

===== Composition/Information on Ingredients =====

Ingred Name:DICHLORODIFLUOROMETHANE

CAS:75-71-8

RTECS #:PA8200000

= Wt:100.

OSHA PEL:4950 MG/M3;1000 PPM

ACGIH TLV:4950 MG/M3;

1000 PPM
EPA Rpt Qty:5000 LBS
DOT Rpt Qty:5000 LBS
Ozone Depleting Chemical:1

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===== Hazards Identification =====
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Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO
Health Hazards Acute and Chronic:SKIN: IRRITATION, DEFATTING. LIQUID
MAY CAUSE FROSTBITE. EYES: LIQUID CAN CAUSE SEVERE FROSTBITE. MIST
MAY IRRITATE. INGESTION: IS AN UNLIKELY ROUTE OF EXPOSURE BECAUSE
OF ITS LOW BOILING POINT. SHOULD IT OCCUR, DISCOMFORT IN THE GI
TRACT WOULD R
ESULT FROM THE RAPID EVAPORATION OF THE LIQUID.
NECROSIS FROM FREEZING OF TISSUE COULD OCCUR. INHALATION: GENETRON
12 IS LOW IN TOXICITY IN ANIMALS EVEN AT A CONCENTRATION OF 5%
(50,000 PPM); HOWEVER, WHEN OXYGEN LEVEL IS REDUCED TO 12-14%,
SYMPTOMS OF ASPHYXIATION, LOSS OF COORDINATION, INCREASED PULSE
RATE AND DEEPER RESPIRATION WILL OCCUR. AT HIGH LEVELS, CARDIAC
ARRHYTHMIA MAY OCCUR.
Explanation of Carcinogenicity:NOT LISTED BY NTP, IARC, OSHA.
Effects of Overexposure:INHALATION: SYMPTOMS OF ASPHYXATION, LOSS OF
COORDINATION, INCREASED PULSE RATE AND DEEPER RESPIRATION, CARDIAC
ARRHYTHMIA. INGESTION: GASTROINTESTINAL TRACT DISCOMFORT, NECROSIS.
SKIN: IRRITATION, DEFATTING, FROSTBITE. EYES: FROSTBITE,
IRRITATION.
Medical Cond Aggravated by Exposure:NONE PROVIDED BY MFR.

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===== First Aid Measures =====
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First Aid:SKIN: FLUSH WITH PLENTY OF WATER. FOR FROSTBITE, BATHE (DO
NOT RUB) WITH LUKEWARM (NOT HOT) WATER. IF NO WATER, COVER WITH
CLEAN, SOFT WOOL OR SIMILAR COVERING. CALL A PHYSICIAN. EYES: FLUSH
WITH LUKE WARM WATER FOR AT LEAST 15 MINUTES. LIFTING EYELIDS
OCCASIONALLY. GET MEDICAL ATTENTION IF SYMPTOMS PERSIST. INGESTION:
UNLIKELY ROUTE OF EXPOSURE. DO NOT INDUCE VOMITING UNLESS
INSTRUCTED BY PHYSICIAN. INHALATION: MOVE TO FRESH AIR. IF NOT
BREATHING, GIVE ARTIFICIAL RESPIRATION. USE OXYGEN AS REQUIRED IF A
QUALIFIED OPERATOR IS AVAILABLE. CALL A PHYSICIAN

. DO NOT GIVE
EPINEPHRINE (ADRENALINE).

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Fire Fighting Measures
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Flash Point Method:TOC

Flash Point:NO FLASH POINT

Extinguishing Media:USE ANY STANDARD AGENT; CHOOSE THE ONE MOST APPROPRIATE 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 TOXIC DECOMPOSITION PRODUCTS. PROPER EYE AND SKIN PROTECTION SHOULD BE PROVIDED. USE WATER SPRAY TO KEEP FIRE-EXPOSED CONTAINERS COOL AND TO SUPPRESS VAPORS

Unusual Fire/Explosion Hazard:CONTACT WITH CERTAIN REACTIVE METALS MAY RESULT IN FORMATION OF EXPLOSIVE OR EXOTHERMIC REACTIONS UNDER SPECIFIC CONDITIONS (E.G. VERY HIGH TEMPERATURES AND/OR APPROPRIATE PRESSURES)

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Accidental Release Measures
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Spill Release Procedures:ALWAYS WEAR RECOMMENDED PERSONAL PROTECTIVE EQUIPMENT.

EVACUATE UNPROTECTED PERSONNEL. PROTECTED PERSONNEL SHOULD REMOVE ANY IGNITION SOURCES AND SHUT OFF LEAK, IF WITHOUT RISK, AND PROVIDE VENTILATION. UNPROTECTED PERSONNEL SHOULD NOT RETURN UNTIL AIR HAS BEEN TESTED AND DETERMINED SAFE, INCLUDING LOW-LYING AREAS. SPILLS AND RELEASES MAY HAVE TO BE REPORTED TO FEDERAL AND/OR LOCAL AUTHORITIES.

Neutralizing Agent:NONE PROVIDED BY MFR.

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Handling and Storage
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Handling and Storage Pre

cautions:WEAR PERSONAL PROTECTIVE EQUIPMENT.

AVOID BREATHING VAPORS, LIQUID CONTACT WITH EYES, SKIN, CLOTHING. DO NOT PUNCTURE OR DROP CYLINDERS, EXPOSE THEM TO OPEN FLAME OR EXCESSIVE HEAT. USE AUTHORIZED CONTAINERS. FOLLOW STANDARD SAFETY PRECAUTIONS FOR HANDLING AND USE OF CYLINDERS OF COMPRESSED GASES.

Other Precautions:STORE IN A COOL, WELL-VENTILATED AREA OF LOW FIRE RISK. PROTECT CONTAINER AND ITS FITTINGS FROM PHYSICAL DAMAGE. STORAGE IN SUBSURFACE LOCATIONS SHO

ULD BE AVOIDED. CLOSE VALVE
TIGHTLY AND REPLACE BUNG AFTER USE AND WHEN EMPTY.

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

Respiratory Protection:NONE GENERALLY REQUIRED FOR ADEQUATELY VENTILATED WORK SITUATIONS. FOR ACCIDENTAL OR NON-VENTILATED SITUATIONS, ABOVE THE RECOMMENDED PEL (1000 PPM), USE A SELF-CONTAINED NIOSH-APPROVED BREATHING APPARATUS OR SUPPLIED AIR RESPIRATOR.

Ventilation:PROVIDE LOCAL EXHAUST AT FILLING ZONES AND WHERE LEAKAGE IN

PROBABLE. MECHANICAL (GENERAL) VENTILATION MAY BE ADEQUATE FOR OTHER OPERATING AND STORAGE AREAS

Protective Gloves:PVA, NEOPRENE, OR BUTYL RUBBER INSULATED GLOVES FOR LIQUID OR GAS CONTACT.

Eye Protection:SAFETY GLASSES FOR NORMAL, CHEMICAL SAFETY GOGGLES IF LIQUID CONTACT POSSIBLE.

Other Protective Equipment:IMPERVIOUS BOOTS IN CASE OF LEAKAGE OR SPILLAGE OR PROBABILITY OF REPEATED OR PROLONGED CONTACT WITH LIQUID PRODUCT. PROVIDE EYEWASH STATIONS, QUICK-DRENCH SHOWER

FACILITIES.

Supplemental Safety and Health

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

HCC:G3

Boiling Pt:=-29.6C, -21.6F

B.P. Text:@ 760 MM HG

Melt/Freeze Pt:=-158.C, -252.4F

Decomp Temp:Decomp Text:NONE PROVIDED BY MFR.

Vapor Pres:84.9 PSIA 70 DEG F

Vapor Density:4.2(AIR=1)

Spec Gravity:1.34 @ 86 DEG F (WATER=1)

pH:NEUTRAL

Viscosity:NONE PROVIDED BY MFR.

Evaporation Rate & Reference:>1 COMPARED TO CCl(4)

Appearance and Odor:CLEAR COLORLESS LIQUID AND VAPOR, FAINT
ETHEREAL

ODOR.

Percent Volatiles by Volume:100 @ 68 F

Corrosion Rate:NONE PROVIDED BY MFR

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

Stability Indicator/Materials to Avoid:YES

FRESHLY ABRADED ALUMINUM SURFACES (MAY CAUSE STRONG EXOTHERMIC REACTION). CHEMICALLY ACTIVE METALS; SODIUM, POTASSIUM, POWDERED ALUMINUM, MAGNESIUM AND ZINC.

Stability Condition to Avoid:IGNITION SOURCES, SUCH AS LIGHTED CIGARETTES, FLAMES, HOT SPOTS WELDING. MAY YIELD TOXIC AND/

OR

CORROSIVE DECOMPOSITION PRODUCTS. AVOID MIXING WITH AIR OR OXYGEN ABOVE ATMOS. PRESS.

Hazardous Decomposition Products:HALOGENS, HALOGEN ACIDS, AND POSSIBLY CARBONYL HALIDES. THESE ARE TOXIC AND CORROSIVE.

Conditions to Avoid Polymerization:WILL NOT OCCUR.

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

Toxicological Information:IMMEDIATE (ACUTE) EFFECTS: ACUTE INHALATION: LC50, 4 HR, RAT= 760,000 PPM; CARDIAC SENSITIZATION THRESHOLD: 50,000 PPM; 10 MI
N EC50=254,000 PPM. DELAYED (SUBCHRONIC AND CHRONIC) EFFECTS: SUBCHRONIC: NO EL= 10,000 PPM. OTHER DATA: TERATOLOGY: NOT A TERATOGEN.

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

Ecological:DISPOSAL BY A LICENSED WASTE DISPOSAL COMPANY MAY BE NECESSARY. THE INFORMATION OFFERED BY MANUFACTURERS MSDS IS FOR THE PRODUCT AS SHIPPED. USE AND/OR ALTERATIONS TO THE PRODUCT SUCH AS MIXING WITH OTHER MATERIALS MAY SIGNIFICANTLY CHANGE THE CHARACTERISTICS OF THE MATERIAL AND ALTER THE RCRA CLASSIFICATION AND THE PROPER DISPOSAL METHOD. DEGRADABILITY (BOD): NOT PERTINENT. OCTANOL WATER PARTITION COEFFICIENT: UNKNOWN.

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

Waste Disposal Methods:WASTE DISPOSAL MUST COMPLY WITH FEDERAL, STATE, AND LOCAL DISPOSAL OR DISCHARGE LAWS. DISPOSAL OF WASTE GENETRON 12 (DICHLORODIFLUOROMETHANE) IS SUBJECT TO FEDERAL REGULATIONS. USERS SHOULD REVIEW THE IR OPERATIONS, THEN CONSULT WITH APPROPRIATE REGULATORY AGENCIES BEFORE DISCHARGING OR DISPOSING OF WASTE MATERIAL.

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

Transport Information:US DOT HAZARD CLASS: US DOT PROPER SHIPPING NAME: DICHLORODI FLUOROMETHANE (R12), HAZARD CLASS= 2.2, PACKING GROUP= NOT APPLICABLE., UN 1028.

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

SARA Title III Information:RQ ANDTPQ: DICHLORODIFLUOROMETHANE: SARA/CERCLA,

RQ= 5000 LBS; SARA EHS, TPQ= NONE. SPILLS/RELEASES
RESULTING IN THE LOSS OF ANY INGREDIENT AT OR ABOVE ITS RQ REQUIRES
IMMEDIATE NOTIFICATION TO THE NATIONAL RESPONSE CENTER
(1-800-424-8802) AND TO YOUR LOCAL EMERGENCY PLANNING COMMITTEE.
SARA 313 TOXIC CHEMICALS: THE FOLLOWING INGREDIENTS ARE SARA 313
"TOXIC CHEMICALS": DICHLORODIFLUOROMETHANE, CAS# 75-71-8,
WT%=100%.

Federal Regulatory Information: TOXIC SUBSTANCES CONTROL ACT (TSCA):
TSCA INVENTORY STATUS: GENETRON
N 12 ON THE TSCA INVENTORY. OTHER
TSCA ISSUES: GENETRON 12 IS SUBJECT TO CLEAN AIR ACT AMENDMENTS
RELATING TO VENTING AND APPLICATIONS. WHMIS CLASSIFICATION
(CANADA): THIS PRODUCT HAS BEEN EVALUATED IN ACCORDANCE WITH THE
HAZARD CRITERIA OF THE CPR AND THE MSDS CONTAINS ALL THE
INFORMATION REQUIRED BY THE CPR. FOREIGN INVENTORY STATUS: EINECS
NUMBER: 2206926.

State Regulatory Information: STATE RIGHT TO KNOW: NO INGREDIENTS LISTED
FOR THIS MATERIAL.

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

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