MERICAN DRY INC -- CARBON DIOXIDE (SOLID) DRY ICE -- 6830-01-165-6174

Product ID: CARBON DIOXIDE (SOLID) DRY ICE
MSDS Date: 04/04/1988
FSC: 6830
NIIN: 01-165-6174
MSDS Number: CBQSH

==== Responsible Party ====
Company Name: AMERICAN DRY INC
Address: SECOND ST PALMER INDUSTRIAL PARK
Box: 719
City: PALMER
State: MA
ZIP: 01069
Country: US
Info Phone Num: 615-292-1180
Emergency Phone Num: 800-424-9300 (CHEMTREC)
CAGE: AMDRY

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

Ingred Name: CARBON DIOXIDE; (DRY ICE)
CAS: 124-38-9
RTECS #: FF6400000
OSHA PEL: 5000 PPM
ACGIH TLV: 5000 PPM; 30000 STEL

Ingred Name: SUPDAT: SODIUM PEROXIDE: EXPLO HAZ. AZIRIDINE: VIOLENT POLYMERIZATION. BARIUM PEROXIDE: INCANDESCENT RXN. BERYLLIUM (ING 3)
RTECS #: 99999999ZZ

Ingred Name: ING 2: (PWDR) & NITROGEN: IGNIT ON HEATING. CERIUM (PWDR) & NITROGEN: IGNIT ON HEATING. CESIUM OXIDE: IGNIT. CHROMIUM (ING 4)
RTECS #: 99999999ZZ

Ingred Name: ING 3: (HEATED): IGNIT & EXPLO. DIETHYL MAGNESIUM & AIR: IGNIT. DIMETHYL ETHER & ALUMINUM HYDRIDE: VIOLENT DECOMP. (ING 5)
RTECS #: 99999999ZZ

Ingred Name: ING 4: LITHIUM: VIGOROUS RXN. LITHIUM & OXYG: IGNIT. LITHIUM & WATER: IGNIT. LITHIUM ACETYLENE CARBIDE DIAMMINO: (ING 6)
RTECS #: 99999999ZZ

Ingred Name: ING 5: IGNIT. MAGNESIUM (DUST): IGNIT & EXPLO. MAGNESIUM
ALUMINUM ALLOYS: IGNIT & EXPLO. MAGNESIUM & SODIUM PEROXIDE: (ING 7)
RTECS #: 9999999ZZ

Ingred Name: ING 6: EXPLO HAZ. MANGANESE (HEATED): IGNIT & EXPLO.
MONOLITHIUM ACETYLIDE: IGNIT. POTASSIUM: EXPLO HAZ WHEN SUBJECTED (ING 8)
RTECS #: 9999999ZZ

Ingred Name: ING 7: TO SHOCK. POTASSIUM ACETYLENE CARBIDE: INCANDESCENT RXN. POTASSIUM-SODIUM ALLOY: MIXT W/SOLID CARBON DIOXIDE (ING 9)
RTECS #: 9999999ZZ

Ingred Name: ING 8: IS EXPLO. RUBIDIUM ACETYLIDE: IGNIT ON HEATING.
SODIUM: IGNIT. SODIUM ACETYLIDE: INCANDESCENT RXN. SODIUM (ING 10)
RTECS #: 9999999ZZ

Ingred Name: ING 9: CARBIDE: INCANDESCENT RXN. SODIUM PEROXIDE: HIGHLY EXOTHERMIC RXN. SODIUM PEROXIDE & ALUMINUM (PWDR) & WATER: (ING 11)
RTECS #: 9999999ZZ

Ingred Name: ING 10: IGNIT. SODIUM PEROXIDE & COTTON WOOL: IGNIT. SODIUM PEROXIDE & MAGNESIUM (PWDR) & WATER: IGNIT. SODIUM (ING 12)
RTECS #: 9999999ZZ

Ingred Name: ING 11: PEROXIDE & TIN (PWDR) & WATER: IGNIT. THORIUM (PWDR) & NITROGEN: IGNIT ON HEATING. TITANIUM: BURNS >550°C. (ING 13)
RTECS #: 9999999ZZ

Ingred Name: ING 12: URANIUM: FINELY DIVIDED METAL IGNITES AT 750°C; MASSIVE METAL IGNITES AT 800°C. URANIUM (PWDR) & NITROGEN: (ING 14)
RTECS #: 9999999ZZ

Ingred Name: ING 13: IGNIT ON HEATING. ZIRCONIUM & NITROGEN: IGNIT ON HEATING. ZIRCONIUM: IGNITION & EXPLOSION.
RTECS #: 9999999ZZ

------------------------------- Hazards Identification -----------------------------

LD50 LC50 Mixture: NONE SPECIFIED BY MANUFACTURER.
Routes of Entry: Inhalation: YES Skin: YES Ingestion: YES
Reports of Carcinogenicity: NTP: NO IARC: NO OSHA: NO
Health Hazards Acute and Chronic: ACUTE: NO ADVERSE EFFECTS FROM GAS. VAPORS MAY CAUSE DIZZINESS OR SUFFOCATION. CONTACT W/LIQUID MAY CAUSE FROSTBITE. IN VAPOR FORM: MAY CAUSE FROSTBITE, SAME AS SKIN. LIQUID OR SOLID MAY CAUSE FROSTBITE. CHRONIC: IF ENVIRON CONTAINS 0.03-0.06% CARBON DIOXIDE GAS & NO ADVERSE EFFECTS ARE EXPECTED FROM PRLNG EXPOS AS THIS LEVEL.
Explanation of Carcinogenicity: NOT RELEVANT
Effects of Overexposure: HEADACHE, INCREASED BREATHING RATE, DIFFICULT BREATHING, PERSPIRATION, DIZZINESS, RINGING IN EAR, LIPS BLUE, TREMORS & WEAKNESS, VISUAL DISTURBANCE, DROWSINESS, UNCONSCIOUSNESS.
Medical Cond Aggravated by Exposure: NONE SPECIFIED BY MANUFACTURER.

------------------------------- First Aid Measures -----------------------------

First Aid: INGEST: CALL MD IMMEDIATELY. EYES: IMMEDIATELY FLUSH W/POTABLE
WATER FOR A MINIMUM OF 15 MINUTES. SEEK ASSISTANCE FROM MD.
SKIN:FLUSH W/CONCOURS AMOUNTS OF WATER. CALL MD. INHAL:REMO VE FROM
EXPOSURE AREA TO FRESH AIR IMMEDIATELY. IF BREATHING HAS STOPPED
GIVE ARTF RESP. MAINTAIN AIRWAY & BLOOD PRESSURE. GET MEDICAL
ATTENTION IMMEDIATELY.

Fire Fighting Measures

Extinguishing Media:CARBON DIOXIDE CANNOT CATCH FIRE. USE MEDIA FOR
SURROUNDING FIRE.
Fire Fighting Procedures:USE NIOSH/MSHA APPRVD SCBA & FULL PROT EQUIP.
EVACUATE ALL PERS FROM DANGER AREA. MOVE CNTRR FROM FIRE AREA IF
POSS. STAY AWAY FROM STOR TANK (SUPDAT)
Unusual Fire/Explosion Hazard:NEGIGBILE FIRE HAZARD WHEN EXPOSED TO
HEAT OR FLAME.

Accidental Release Measures

Spill Release Procedures: DO NOT TOUCH SPILLED MATERIAL. STOP LEAK IF
YOU CAN DO SO W/OU RISK. KEEP UNNECESSARY PEOPLE AWAY! ISOLATE
HAZARD AREA & DENY ENTRY. VENTILATE CLOSED SPACES BEFORE ENTERING.
Neutralizing Agent: NONE SPECIFIED BY MANUFACTURER.

Handling and Storage

Handling and Storage Precautions: IF CONTACT W/LIQ OR SOLID, WEAR COLD
INSULATING GLOVES, EYE PROT; EMPLOYEES MUST WEAR
SPASH-PROOF/DUST-RESIST SFTY GOGGLES.
Other Precautions: FOR GAS FORM, NO PROTECTIVE CLOTHING REQUIRED.

Exposure Controls/Personal Protection

Respiratory Protection: NIOSH/MSHA APPROVED RESPIRATOR APPROPRIATE FOR
EXPOSURE OF CONCERN.
Ventilation: LOCAL EXH/GENERAL DILUTION VENT TO MEET PELS. MECHANICAL
(GENERAL): EXHAUST FANS WHERE NECESSARY.
Protective Gloves: COLD INSULATING TYPE GLOVES.
Eye Protection: ANSI APPROVED CHEM WORKERS GOGGS(SUPDAT)
Other Protective Equipment: EYE WASH FOUNTAIN & DELUGE SHOWER WHICH MEET
ANSI DESIGN CRITERIA . USE LONG SLEEVE SHIRTS/CLTHG APPROP
TO(SUPDAT)
Work Hygienic Practices: NONE SPECIFIED BY MANUFACTURER.
Supplemental Safety and Health

FIRE FIGHT PROC:ENDS. COOL FIRE-EXPOS CNTRRS FROM SIDE UNTIL WELL AFTER
FIRE IS OUT. EYE PROT: FULL LGTH FCSHLD . OTHER PROT EQUIP: PVNT
SKIN FROM FREEZING. MATLS TO AVOID:IODIDE/ALUMINUM CHLORI DE
ACCELERATES RXN TO INCANDESCENCE. ALUMINUM HYDRIDE &
BIS(2-METHOXYETHYL)ETHER: VIOLENT DECOMP. ALUMINUM & (ING 2)

Physical/Chemical Properties

Boiling Pt:B.P. Text:-109F,-78C
Melt/Freeze Pt:M.P/F.P Text:-94F,-70C
Vapor Pres:569 @ -82C
Vapor Density:1.5
Spec Gravity:1.56 (H*20=1)
Evaporation Rate & Reference:HIGH (BUTYL ACETATE=1)
Solubility in Water: 1.6%
Appearance and Odor: EXTREMELY COLD, WHITE SNOW-LIKE FLAKES OR CUBES WHICH SUBLIME AT ROOM TEMP.

----------------- Stability and Reactivity Data -----------------

Stability Indicator/Materials to Avoid: YES
ACRYLALDEHYDE: EXOTHERMIC RXN & VIOLENT POLYMERIZATION.
ALUMINUM(PWDR): IGNITES WHEN HEATED; PRESENCE OF ALUMINUM (SUPDAT)
Stability Condition to Avoid: STABLE UNDER NORMAL TEMPERATURES & PRESSURES. CONTAINER MAY EXPLODE IN HEAT OF FIRE.
Hazardous Decomposition Products: TEMPERATURES > 1700°C MAY CAUSE DECOMPOSITION & RELEASE OF OXYGEN & CARBON MONOXIDE.

----------------- Disposal Considerations -----------------

Waste Disposal Methods: DISPOSAL MUST BE I/A/W FEDERAL, STATE & LOCAL REGULATIONS. PROVIDE LOCAL EXHAUST VENTILATION &/OR GENERAL DILUTION VENTILATION TO MEET PELS. SLOWLY RELEASE INTO ATMOSPHERE OUTDOORS.

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