

MATERIAL SAFETY DATA SHEET

DISTRIBUTED BY:

TRIDENT DIVING EQUIPMENT
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CHATSWORTH, CA 91311
PHONE 818-998-7518

PRODUCT NAME: CO2 CARTRIDGES, DA44, DA45, DA46, DA47, DA48

MSDS DATE 2/10/1995

SUBSTANCE IDENTITY

SUBSTANCE; CARBON DIOXIDE, GAS

CAS# 124-38-9

MOLECULAR FORMULA; C-02

MOLECULAR WEIGHT 44.01

CHEMICAL FAMILY; OXIDE OF CARBON

CERCLA RATINGS (SCALE 0-3) HEALTH = 3, FIRE = 0, REACTIVITY = 0

PERSISTENCE = 0

NFPA RATINGS (SCALE 0-4) HEALTH = 0, FIRE = 0, REACTIVITY = 0

COMPONENTS AND CONTAMINANT'S

COMPONENT; CARBON DIOXIDE, GAS (CAS# 124-38-9) PERCENT 100.0

OTHER CONTAMINANT'S: NONE

PHYSICAL DATA

DESCRIPTION; ODORLESS, COLORLESS GAS, WITH A SLIGHT ACIDIC TASTE

BOILING POINT; -109F (-70C) (SUBLIMES)

MELTING POINT; -70F (-57C) @ 4000 MM/HG

SPECIFIC GRAVITY; 1.52 @ 21C

VAPOR PRESSURE 43700MMHG @ 21C

PH; ACIDIC IN SOLUTION

SOLUBILITY IN WATER; SOLUBLE

VAPOR DENSITY; 1.5

SOLVENT SOLUBILITY; SOLUBLE IN ALCOHOL, ACETONE, HYDROCARBONS,
MOST ORGANIC LIQUIDS

VAPOR DENSITY; 1.977 G/L @ 750 MMHG AND 0C

FIRE AND EXPLOSION DATA

FIRE/EXPLOSION HAZARD; GAS--NEGLIGIBLE FIRE HAZARD WHEN EXPOSED TO
HEAT OR FLAME

CYLINDER--MAY EXPLODE IN HEAT OF FIRE

EXTINGUISHING MEDIA; DRY CHEMICAL, CARBON DIOXIDE, OR HALON. FOR
LARGER FIRES, USE WATER SPRAY, FOG OR STANDARD FOAM

FIREFIGHTING; COOL FIRE-EXPOSED CYLINDERS WITH WATER FROM THE SIDE UNTIL WELL AFTER THE FIRE IS OUT. USE AGENTS SUITABLE FOR TYPE OF FIRE. COOL CYLINDERS WITH FLOODING AMOUNTS OF WATER, APPLIED FROM AS FAR A DISTANCE AS POSSIBLE

CONDITIONS TO AVOID

DO NOT PERMIT PHYSICAL DAMAGE OR OVERHEATING OF CYLINDERS. CONTENTS ARE UNDER PRESSURE; CYLINDERS MAY RUPTURE AND HAVE A CONSIDERABLE DISTANCE. CONTACT OF LIQUEFIED GASES WITH WATER MAY CAUSE EXPLOSIONS DUE TO RAPID TEMPERATURE FLUCTUATIONS.

STORAGE AND DISPOSAL

STORE IN ACCORDANCE WITH 29 CFR 1910.101. FOR ASSISTANCE, CONTACT THE DISTRICT DIRECTOR OF THE EPA

REACTIVITY

STABLE UNDER NORMAL TEMPERATURES AND PRESSURES

INCOMPATIBILITIES; ACRYLALDEHYDE; EXOTHERMIC POLYMERIZATION; BARIUM PEROXIDE; INCANDESCENT REACTION; CESIUM OXIDE; IGNITION; DIETHYL MAGNESIUM; IGNITION; ETHYLENEIMINE; EXPLOSIVE POLYMERIZATION; HYDRAZINE; DECOMPOSITION; METAL ACETYLIDES; IGNITION OR INCANDESCENCE; METAL HYDRIDES; REDUCTION REACTION; METALS; DUSTS OF MANY METAL SUSPENDED IN CARBON DIOXIDE ATMOSPHERES ARE IGNITABLE AND EXPLOSIVE. SOME BULK METALS WILL BURN IN THE GAS AT ELEVATED TEMPERATURES; POTASSIUM-SODIUM ALLOY; MIXTURES OF THE SOLIDS ARE IMPACT-SENSITIVE; SODIUM PEROXIDE; HIGHLY EXOTHERMIC REACTION, MAY BE EXPLOSIVE IN PRESENCE OF METALS.

DECOMPOSITION; TEMPERATURES ABOVE 1700C MAY CAUSE DECOMPOSITION AND THE RELEASE OF OXYGEN AND HIGHLY TOXIC CARBON MONOXIDE.

POLYMERIZATION; HAZARDOUS POLYMERIZATION HAS NOT BEEN REPORTED TO OCCUR UNDER NORMAL TEMPERATURES AND PRESSURES.

HEALTH HAZARD DATA

CARCINOGEN STATUS; NONE

ACUTE TOXICITY LEVEL; INSUFFICIENT DATA AVAILABLE

TARGET EFFECTS; SIMPLE ASPHYXIAN, POISONING MAY AFFECT HEART, RESPIRATORY AND NERVOUS SYSTEMS

INHALATION;

SIMPLE ASPHYXIANTS;

ACUTE EXPOSURE; INITIALLY, EXPOSURE TO INCREASED CARBON DIOXIDE CONCENTRATIONS RESULTS IN A COMPENSATORY INCREASE IN BOTH RATE AND DEPTH OF VENTILATION. BEYOND A CERTAIN POINT, HOWEVER, THIS MAY REVERSE TO HYPOVENTILATION RESULTING IN RESPIRATORY ACIDOSIS. DEATH FROM ASPHYXIA MAY OCCUR IF THE CONCENTRATION AND DURATION OF EXPOSURE ARE SUFFICIENT.

FIRST AID; IMMEDIATELY REMOVE FROM EXPOSURE AREA TO FRESH AIR. IF BREATHING HAS STOPPED, GIVE ARTIFICIAL RESPIRATION. MAINTAIN AIRWAY AND BLOOD PRESSURE. KEEP AFFECTED PERSON WARM. GET MEDICAL ATTENTION IMMEDIATELY.

SKIN CONTACT;

ACUTE EXPOSURE; NO ADVERSE EFFECTS HAVE BEEN REPORTED FROM THE GAS. DUE TO RAPID EVAPORATION, THE LIQUID MAY CAUSE FROSTBITE WITH REDNESS, TINGLING, PAIN, OR NUMBNESS. IN SEVERE CASES, THE SKIN MAY BECOME HARD, WHITE, AND DEVELOP BLISTERS.

FIRST AID; IN CASE OF FROSTBITE, WARM AFFECTED SKIN IN WARM WATER (107F). IF WARM WATER IS UNAVAILABLE, GENTLY WRAP AFFECTED ARE IN BLANKETS. ALLOW CIRCULATION TO RETURN NATURALLY. GET MEDICAL ATTENTION IMMEDIATELY.

INGESTION;

ACUTE EXPOSURE; UNLIKELY. IF LIQUID IS SWALLOWED, FROSTBITE DAMAGE TO LIPS, MOUTH AND MUCOUS MEMBRANES MAY OCCUR.

FIRST AID; TREAT SYMPTOMATICALLY AND GET MEDICAL ATTENTION

PROTECTIVE EQUIPMENT

VENTILATION; PROVIDE GENERAL DILUTION VENTILATION.

RESPIRATOR; ANY SELF-contained breathing apparatus.

CLOTHING/GLOVES; PROTECTIVE CLOTHING IS NOT REQUIRED

EYE PROTECTION; NOT REQUIRED, BUT ADVISABLE

MSDS PREPARED BY: QUALITY CONTROL DEPT.

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