Material Safety Data Sheet

EMERGENCY NUMBERS:

(USA) CHEMTREC : 1(800) 424-9300 (24hrs)
(CAN) CANUTEC : 1(613) 996-6666 (24hrs)
(USA) Anachemia : 1(518) 297-4444
(CAN) Anachemia : 1(514) 489-5711

WHMIS	Protective Clothing	TDG Road/Rail
WHMIS CLASS: B-2 D-2B		TDG CLASS: 3 PIN: UN1148 PG: III
		

Section I. Product Identification and Uses

Product name	**DIACETONE ALCOHOL**
Chemical formula	(CH3)2C(OH)CH2COCH3
Synonyms	4-Hydroxy-4-methyl-2-pentanone, 2-Methyl-2-Pentanol-4-none, AC-2863T, 31188
Supplier	Anachemia Canada. 255 Norman. Lachine (Montreal), Que H8R 1A3
Material uses	For laboratory use only.

CI#	Not available.
CAS#	123-42-2
Code	AC-2863T
Formula weight	116.16
Supersedes	

Section II. Ingredients

Name	CAS #	%	TLV
1) DIACETONE ALCOHOL	123-42-2	60-100	Exposure limits: ACGIH TWA 50 ppm (238 mg/m3)

Toxicity values of the hazardous ingredients

DIACETONE ALCOHOL:
ORAL (LD50): Acute: 2520 mg/kg (Rat). 3950 mg/kg (Mouse).
DERMAL (LD50): Acute: 13500 mg/kg (Rabbit).

Section III. Physical Data

Physical state and appearance / Odor	Clear, colorless, mobile liquid with mild characteristic ketone odor.
pH (1% soln/water)	Not available.
Odor threshold	0.27 ppm
Percent volatile	100% (V/V)
Freezing point	Not available.
Boiling point	169°C
Specific gravity	0.94 (Water = 1)
Vapor density	4 (Air = 1)
Vapor pressure	1.1 mm of Hg (@ 20°C)
Water/oil dist. coeff.	Not available.
Evaporation rate	0.12 (n-Butyl acetate = 1).
Solubility	Miscible in water.

Section IV. Fire and Explosion Data

Flash point	CLOSED CUP: 52°C (Tag Closed Cup)
Flammable limits	LOWER: 1.8% UPPER: 6.9%
Auto-ignition temperature	603°C
Fire degradation products	Oxides of carbon (CO, CO2).
Fire extinguishing procedures	Use DRY chemical, carbon dioxide, or foam. Wear adequate personal protection to prevent contact with material or its combustion products. Self contained breathing apparatus with a full facepiece operated in a pressure demand or other positive pressure mode. Cool containing vessels with flooding quantities of water until well after fire is out.
Fire and Explosion Hazards	Flammable liquid. Vapor may travel considerable distance to source of ignition and flash back, eliminate all sources of ignition. Vapor forms explosive mixture with air between upper and lower explosive limits. Container explosion may occur under fire conditions or when heated. Handle as flammable liquid; will react with oxidizing materials when exposed to heat or flame. Emits toxic fumes under fire conditions.

Section V. Toxicological Properties

Routes of entry	Inhalation and ingestion. Eye contact. Skin contact. Skin absorption.
Effects of Acute Exposure	Harmful by ingestion, inhalation or skin absorption. Irritant. Target organs: blood, central nervous system, liver, kidneys, eyes, skin, respiratory system. 1800 ppm (DIACETONE ALCOHOL) is immediately dangerous to life or health.
Eye	Causes severe irritation. May cause severe burns and loss of vision. May cause permanent damage. IRRITATION: EYE-RABBIT 20 mg SEVERE.
Skin	Causes skin irritation. Liquid dries skin. Repeated or prolonged contact can cause dermatitis. Prolonged or wide spread skin contact may result in the absorption of potentially harmful amounts of material.
Inhalation	High vapor concentrations may cause irritation of the respiratory tract and narcosis. May cause dizziness, nausea, vomiting, central nervous system depression, anemia, liver and kidney damage.
Ingestion	Moderately toxic. May cause abdominal discomfort, nausea, vomiting, diarrhea, narcosis, and liver and kidney damage. Aspirated diacetone alcohol may cause lung damage and present a significant hazard.

Section V. Toxicological Properties

Effects of Chronic Overexposure	Repeated exposure has been shown to result in adverse effects in the kidney, liver and blood of laboratory animals. Carcinogenic effects: Not available. Mutagenic effects: Not available. Teratogenic effects: Not available. Toxicity of the product to the reproductive system: Not available. To the best of our knowledge, the chemical, physical, and toxicity of this substance has not been fully investigated.

Section VI. First Aid Measures

Eye contact	Immediately flush eyes with copious quantities of water for at least 15 minutes holding lids apart to ensure flushing of the entire surface. Seek immediate medical attention.
Skin contact	Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. If irritation occurs or persists seek medical attention. Wash contaminated clothing before reusing.
Inhalation	Remove patient to fresh air. Administer approved oxygen supply if breathing is difficult. Administer artificial respiration or CPR if breathing has ceased. Call a physician.
Ingestion	Give a large quantity of water to dilute. Seek immediate medical attention. Guard against aspiration into lungs. NOTE TO PHYSICIAN: Aspirated diacetone alcohol may cause lung damage and present a significant hazard. Stomach contents should be evacuated quickly in a manner which avoids aspiration. There is no specific antidote. Treatment of overexposure should be directed at the control of symptoms and the clinical condition.

Section VII. Reactivity Data

Stability	Stable. Conditions to avoid: High temperatures, sparks, open flames and all other sources of ignition, contamination.
Hazardous decomp. products	Not available.
Incompatibility	Caustic soda and other strong alkalis, strong inorganic acids acids, amines, oxidizing agents, chromium trioxide, ammonia, pyridines, reducing agents, acetaldehyde, ethylene oxide, hexamethylene diisocyanate, hydrogen peroxide, sulfuric acid, hypochlorous acid, diisocyanates, isocyanates, lithium aluminum hydride, nitrogen teroxide, perchloric acid, barium perchlorate, diethyl aluminum bromide, tri-isobutyl aluminum.
Reaction Products	Not available. Hazardous polymerization will not occur.

Section VIII. Preventive Measures

Protective Clothing in case of spill and leak	Wear self-contained breathing apparatus, rubber boots and heavy rubber gloves.
Spill and leak	Evacuate the area. Eliminate all sources of ignition. Absorb on sand or vermiculite and place in a closed container for disposal. Use non-sparking tools. Transport outdoors. Ventilate area and wash spill site after material pick up is complete. DO NOT empty into drains. DO NOT touch damaged container or spilled material. Runoff to sewer may create fire or explosion hazard.
Waste disposal	Burn in a chemical incinerator equipped with an after burner and scrubber. According to all applicable regulations. May be harmful to aquatic life. Can be dangerous if allowed to enter drinking water intakes. Do not contaminate domestic or irrigation water supplies, lakes, streams, ponds, or rivers.
Storage and Handling	Store in a cool place away from heated areas, sparks, and flame. Store in a well ventilated area. Store away from incompatible materials. Do not add any other material to the container. Do not wash down the drain. Do not breathe gas/fumes/vapor/spray. In case of insufficient ventilation, wear suitable respiratory equipment. Keep container tightly closed and dry. Manipulate under an adequate fume hood. Take precautionary measures against electrostatic discharges. Ground the container while dispensing. Ground all equipment containing material. Use explosion proof equipment. Use non-sparking tools. Empty containers may contain a hazardous residue. Handle and open container with care. Take off immediately all contaminated clothing. This product must be manipulated by qualified personnel. Do not get in eyes, on skin, or on clothing. Wash well after use. In accordance with good storage and handling practices. Do not allow smoking and food consumption while handling. Watch for accumulation in low confined areas. Do not use pressure to dispense. Do not use handling equipment or containers composed of magnesium, aluminum or their alloys. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively.

Section IX. Protective Measures

Protective clothing	Splash goggles. Impervious butyl or neoprene gloves, apron, coveralls, and/or other resistant protective clothing. Sufficient to protect skin. A OSHA/MSHA jointly approved respirator is advised in the absence of proper environmental controls. If more than TLV, do not breathe vapor. Wear self-contained breathing apparatus. Do not wear contact lenses. Make eye bath and emergency shower available. Ensure that eyewash station and safety shower is proximal to the work-station location.
Engineering controls	Use in a chemical fume hood to keep airborne levels below recommended exposure limits. Use explosion-proof ventilation equipment. Do not use in unventilated spaces.

Section X. Other Information

Special Precautions or comments

Flammable liquid! Severe irritant! Do not breathe vapor. Avoid all contact with the product. Avoid prolonged or repeated exposure. Use in a chemical fume hood. Keep away from heat, sparks and flame. Use non-sparking tools. Bond and ground transfer containers and equipment to avoid static accumulation. PROCESS HAZARD: Sudden release of hot organic chemical vapors or mists from process equipment operating at elevated temperature and pressure, or sudden ingress of air into vacuum equipment, may result in ignitions without the presence of obvious ignition sources. Published "autoignition" and "ignition" temperature values cannot be treated as safe operating temperatures in chemical processes without analysis of the actual process conditions. Any use of this product in elevated-temperature processes should be thoroughly evaluated to establish and maintain safe operating conditions.
RTECS NO: SA9100000 (Diacetone alcohol).

NFPA

Prepared by MSDS Department/Département de F.S..

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