



# SAFETY DATA SHEET

**PRODUCT NAME:** DIACETONE ALCOHOL

Issue Date: August 22

## IDENTIFICATION

**Product Name:** Diacetone Alcohol  
**Other Names:** 2-Pentanone, 4-hydroxy-4-methyl; Dimethyl acetonylcarbinol  
**Product Code:** ZDALCO  
**Uses:** Solvent  
**Supplier:** HamChem Hamilton Chemicals Ltd, 75 Ruffell Rd, Hamilton  
Phone: 079744971 Email: [info@hamchem.co.nz](mailto:info@hamchem.co.nz), Web: [www.hamchem.nz](http://www.hamchem.nz)

- In emergency dial 111, and then ask for Fire, Ambulance or Police as necessary.
- In case of poisoning phone National Poisons Centre – 0800 764 766

## HAZARD IDENTIFICATION



### GHS Classifications

Flammable Liquid – Category 3

Eye Irritation – Category 2

**Signal Word:** WARNING

### Hazard Statements

H226 Flammable liquid and vapour

H319 Causes serious eye irritation

### Prevention

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P233 Keep container tightly closed

P240 Ground and bond container and receiving equipment

P241 Use explosion-proof electrical/ventilating/lighting equipment

P242 Use non-sparking tools

P243 Take action to prevent static discharges

P280 Wear protective gloves/clothing and eye/face protection

P264 Wash hands thoroughly after handling

### Response

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [wash with soap if available].

P332 + P313 If skin irritation occurs: Get medical advice.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337 + P313 If eye irritation persists: Get medical advice.

P370 + P378 In case of fire: Use water fog/mist or alcohol-resistant foam.

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**Storage Statement:**

P403 + P235 Store in a well-ventilated place. Keep cool.

**Disposal Statement:**

P501 Dispose of contents/container to approved waste facility in accordance with local regulations

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| <b>COMPOSITION &amp; INFORMATION ON INGREDIENTS</b> |
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| Chemical Entity   | CAS No.  | Proportion (%) |
|-------------------|----------|----------------|
| Diacetone Alcohol | 123-42-2 | >98            |

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| <b>FIRST AID MEASURES</b> |
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Consult the National Poisons Centre, 0800 764 766 [0800 POISON] or a doctor in every case of suspected poisoning. If medical advice is needed, have product container or label at hand.

**INGESTION:** Rinse mouth with water. Do NOT induce vomiting. Call a Poison Centre or Doctor for advice if person feels unwell. If vomiting occurs spontaneously, keep head below hips to prevent aspiration.

**INHALATION:** Move person to fresh air and keep warm and at rest until recovered. Call a Poison Centre or Doctor for advice or take to local medical facility if person feels unwell.

**SKIN:** Remove immediately all contaminated clothing. Wash affected area with plenty of water followed by soap and water. Get medical advice if irritation occurs.

**EYES:** Hold eyes open and rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do after the first 5 minutes. Continue rinsing for at least 15 minutes. Get medical attention if irritation persists.

**NOTES TO PHYSICIAN:** Treat symptomatically. Potential for chemical pneumonitis. Consider gastric lavage with protected airway and administration of activated charcoal. Can cause central nervous system depression.

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| <b>FIRE FIGHTING MEASURES</b> |
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**EXTINGUISHING MEDIA:** Use water fog or mist or alcohol-resistant foam. Use dry chemical powder, carbon dioxide, sand or earth for small fires only. Do NOT use water in a jet.

**FIRE & EXPLOSION HAZARDS:** In case of fire, avoid breathing smoke. Carbon monoxide evolved if incomplete combustion. Prevent extinguishing water from getting into the aquatic environment.

**SPECIFIC HAZARDS:** Vapour is heavier than air, will spread across the ground and distant ignition is possible. Cool fire exposed containers by spraying with water.

**FIRE-FIGHTING EQUIPMENT:** Wear self-contained breathing apparatus and personal protection clothing.

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| <b>ACCIDENTAL RELEASE MEASURES</b> |
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**SPILLS:** Wear personal protective equipment. Avoid contact with skin and eyes. Flammable liquid. Shut off leak if safe to do so. Remove or isolate ignition sources. Take precautions against static discharge. Bound or ground (earth) all equipment. Use non-sparking tools. Ventilate contaminated area. Isolate hazard area and keep unnecessary and unprotected people away from area. Stay upwind and keep out of low-lying areas. Contain spill. Avoid run off into drains or sewers. Do not contaminate watercourses or the ground. For large spills (more than a drum), recover liquid and transfer by mechanical means to labelled salvage tank that can be sealed for recovery or disposal of product. Do not flush away residues with water. Allow residues to evaporate. Remove any contaminated soil and dispose of safely by waste management

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company. For small spills, absorb with an appropriate material, e.g., vermiculite, and dispose of waste safely in a labelled sealed container for recovery or disposal. If contamination of drains, sewers or waterways occurs immediately notify Emergency Services (111).

**DISPOSAL:** Dispose of contaminated waste or product to a solvent recycling facility or to an approved landfill in accordance with local regulations.

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| <b>HANDLING &amp; STORAGE</b> |
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**HANDLING:** Flammable liquid and vapour. Read label before use. Keep container closed when not in use. Use only in well-ventilated areas. No smoking. Avoid breathing vapours or direct contact with product. Wear personal protective equipment. Wash hands and exposed skin after handling. Remove ignition sources. Avoid sparks. Electrostatic charge may be generated during pumping with risk of fire. Restrict line viscosity to avoid generation of electrostatic discharge (< 1m/sec until fill pipe submerged to twice its diameter, then < 7 m/sec). Take precautions to use bonded or grounded (earthed) equipment. Do not use compressed air for filling, discharging or handling.

**STORAGE:** Ensure all storage areas have adequate fire-fighting equipment. Store securely in closed original container in a cool dry well-ventilated place, away from sunlight, ignition sources, heat, incompatible substances, aerosols, other flammables, oxidizing agents, and corrosives, out of reach of children, and away from food, drink and animal foodstuffs. Vapour heavier than air. Take precautions to avoid vapour accumulation in pits and confined spaces.

**Recommended materials:** For containers, or container linings use mild steel or stainless steel. For container paints, use epoxy paint or zinc silicate paint.

**Unsuitable materials:** Most plastics.

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| <b>EXPOSURE CONTROLS &amp; PERSONAL PROTECTION</b> |
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**EXPOSURE GUIDELINES:** NZ Workplace Exposure Standard (WES) have been set for this substance. (Worksafe NZ, 2022)

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| Diacetone alcohol | 50 ppm (238 mg/m <sup>3</sup> ) |

**ENGINEERING CONTROLS:** Use only in a well-ventilated area. A half-face filter mask suitable for organic gases and vapours is recommended. Where respiratory protective equipment is required, use a full-face mask. Where air-filtering respirators are unsuitable (e.g., air-borne concentrations are high, risk or oxygen deficiency, confined space) use positive pressure breathing apparatus.

**PERSONAL PROTECTIVE EQUIPMENT (PPE):** Wear protective clothing. Safety shoes and boots need to be chemically resistant. Wear appropriate chemical resistant gloves, e.g., Neoprene. For incidental/splash protection alternative options are PVC, nitrile rubber, polyvinyl alcohol gloves. Wear chemical goggles. Refer to the relevant AS/NZ standards for appropriate personal protective equipment.

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| <b>PHYSICAL &amp; CHEMICAL PROPERTIES</b> |
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| <b>Appearance:</b>                       | Clear colourless liquid |
| <b>Odour:</b>                            | Characteristic          |
| <b>Odour threshold:</b>                  | Not available           |
| <b>pH:</b>                               | Not applicable          |
| <b>Melting point/Freezing point(°C):</b> | Not available           |
| <b>Boiling point/Boiling range (°C):</b> | 150 -172                |
| <b>Flash point (°C):</b>                 | 58                      |
| <b>Flammability (solid, gas):</b>        | Not applicable          |

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| Upper/lower flammability limits in air (%v/v): | 1.8 to 6.9    |
| Vapour pressure (Pa at 20°C):                  | 120           |
| Vapour density (air =1):                       | 4             |
| Relative density at 20°C, g/cc:                | 0.94          |
| Solubility in water:                           | Soluble       |
| Partition coefficient: n-octanol/water:        | Not available |
| Auto-ignition temperature (°C):                | 620           |
| Decomposition temperature (°C):                | Not available |
| Dynamic viscosity (mPa.s @ 20°C):              | Not available |
| Volatile organic carbon content:               | 62 %          |
| Evaporation rate (nBuAc =1):                   | 0.15          |

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| STABILITY & REACTIVITY |
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**STABILITY:** Stable under normal conditions of storage and use.

**CONDITIONS TO AVOID:** Stable under normal storage and use conditions. Avoid heat, sparks, open flames and other ignition sources.

**INCOMPATIBILITY (MATERIALS TO AVOID):** Strong oxidizing agents, strong acids.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Thermal decomposition is highly dependent on conditions. A complex mixture of airborne solids, liquids and gases, including carbon monoxide, carbon dioxide and other organic compounds will be evolved when this material undergoes combustion or thermal or oxidative degradation. Diacetone alcohol decomposes readily above 50°C in the presence of catalytic amounts of alkaline materials to produce acetone which is much more volatile and flammable than diacetone alcohol. Mesityl oxide (MO) is formed when diacetone alcohol. is heated in the presence of catalytic amounts of acid. Mesityl oxide is also more volatile and flammable than diacetone alcohol.

**HAZARDOUS POLYMERIZATION:** Not known to occur.

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| TOXICOLOGICAL INFORMATION |
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**POTENTIAL HEALTH EFFECTS:** This section includes possible adverse effects, which might occur if this product is not handled in the recommended manner.

**ACUTE TOXICITY:** May be harmful if swallowed.

**ASPIRATION HAZARD:** Not classified with aspiration hazard however if product enters lungs symptoms may include coughing, choking, wheezing, difficulty breathing, chest congestion, shortness of breath and/or fever.

**RESPIRATORY IRRITATION:** Inhalation of vapours may be irritating to respiratory system.

**SKIN CORROSION/IRRITATION:** Mild skin irritant. Prolonged or repeated exposure may cause defatting of the skin which can lead to dermatitis.

**SERIOUS EYE DAMAGE/IRRITATION:** Irritating to eyes. Symptoms can include burning sensation, redness, swelling and/or blurred vision.

**RESPIRATORY OR SKIN SENSITISATION:** Not classified.

**GERM CELL MUTAGENICITY:** Not classified.

**CARCINOGENICITY:** Not classified.

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**REPRODUCTIVE TOXICITY:** Not classified.

**SPECIFIC ORGAN TOXICITY (REPEATED AND SINGLE EXPOSURE):** Breathing in of high concentrations may cause central nervous system depression resulting in dizziness, light headedness, headache, nausea and loss of co-ordination. Continued inhalation may result in unconsciousness and death. The kidney is affected in rats but is not considered relevant to humans. The liver increases in size in animals, which is believed to be an adaptive rather than a toxic effect.

**NARCOTIC EFFECTS:** No information available.

**Toxicological data:**

Diacetone alcohol Oral, mouse LD50 3950 mg/kg b.w.

**Additional information:** The kidney is affected in rats but is not considered relevant to humans. The liver increases in size in animals, which is believed to be an adaptive rather than a toxic effect.

**ECOLOGICAL INFORMATION**

**ECOTOXICITY:** Product has no ecotoxic classifications.

**PERSISTENCE AND BIODEGRADABILITY:** Expected to be readily biodegradable.

**POTENTIAL FOR BIOACCUMULATION:** No bioaccumulation hazard expected.

**MOBILITY IN SOIL:** Product is miscible in water. May contaminate groundwater.

**OTHER ADVERSE EFFECTS:** Not available.

**Ecotoxicological data:** Not available.

**DISPOSAL CONSIDERATIONS**

**DISPOSAL:** Recover and recycle product whenever possible. Send clean dry drums to recycling facility or metal scrap reclaimer. Dispose of waste in accordance with Regional Authority or local council bylaws.

**SPECIAL PRECAUTIONS:** Ensure empty containers are vented and dry. Residues may cause an explosion hazard. Do not puncture, cut or weld uncleaned drums. Do not use empty drums for storing other products.

**TRANSPORT INFORMATION**

**UN Number:** 1148  
**Proper Shipping Name:** DIACETONE ALCOHOL  
**Class:** 3 – Flammable Liquid  
**Packing Group:** III  
**Hazchem:** 2Y  
**Marine Pollutant:** No

**REGULATORY INFORMATION**

**HSNO Classifications:** 3.1C, 6.4A  
**EPA Approval Code:** HSR001120

**OTHER INFORMATION**

**End of SDS.**

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