

1. PRODUCT AND COMPANY IDENTIFICATION**Company**

Transchem, Inc
2141 Palomar Airport Rd. Ste 125
Carlsbad CA 92011

Customer Service Telephone Number: 760-431-6310
(Monday through Friday, 8:00 AM to 5:00 PM EST)

Emergency Information

Transportation: CHEMTEL: (800) 255-3924
(24 hrs., 7 days a week)

Product Information

Product name: DIACETONE ALCOHOL
Synonyms: DA
Molecular formula: C6 H12 O2
Chemical family: Alcohol
Product use: Chemical intermediate, Formulated product, Coatings, Water treatment, Oils and lubricants., Industrial cleaning, Polymer, Drilling applications, Metal working fluids, Laboratory chemicals, Manufacture of pesticides and other agrochemical products, Binder

2. HAZARDS IDENTIFICATION**Emergency Overview**

Color: colourless
Physical state: liquid
Odor: mint-like

***Classification of the substance or mixture:**

Flammable liquid., Category 4, H227
Eye irritation, Category 2B, H320
Specific target organ toxicity - single exposure, Category 3, Respiratory system, H335

*For the full text of the H-Statements mentioned in this Section, see Section 16.

GHS-Labeling

Hazard pictograms:



Signal word:

Warning**Hazard statements:**

H227 : Combustible liquid.
H320 : Causes eye irritation.
H335 : May cause respiratory irritation.

Supplemental Hazard Statements:

May displace oxygen and cause rapid suffocation.

Precautionary statements:**Prevention:**

P210 : Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P261 : Avoid breathing gas/mist/vapours/spray.
P264 : Wash skin thoroughly after handling.
P271 : Use only outdoors or in a well-ventilated area.
P280 : Wear protective gloves/ eye protection/ face protection.

Response:

P304 + P340 : IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305 + P351 + P338 : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312 : Call a POISON CENTER/doctor if you feel unwell.
P337 + P313 : If eye irritation persists: Get medical advice/ attention.
P370 + P378 : In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

Storage:

P403 + P233 : Store in a well-ventilated place. Keep container tightly closed.
P403 + P235 : Store in a well-ventilated place. Keep cool.
P405 : Store locked up.

Disposal:

P501 : Dispose of contents/ container to an approved waste disposal plant.

Supplemental information:**Potential Health Effects:**

Central nervous system effects: headache, nausea, dizziness, drowsiness, loss of consciousness. Vapor is heavier than air and can cause suffocation by reducing oxygen available for breathing.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No.	Wt/Wt	GHS Classification**
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	> 99 %	H227, H320, H335

**For the full text of the H-Statements mentioned in this Section, see Section 16.

4. FIRST AID MEASURES

4.1. Description of necessary first-aid measures:

Inhalation:

If inhaled, remove victim to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Skin:

In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse.

Eyes:

Immediately flush eye(s) with plenty of water. Get medical attention.

Ingestion:

If swallowed, DO NOT induce vomiting. Get medical attention. Never give anything by mouth to an unconscious person.

4.2. Most important symptoms/effects, acute and delayed:

For most important symptoms and effects (acute and delayed), see Section 2 (Hazard Statements and Supplemental Information) and Section 11 (Toxicology Information) of this SDS.

4.3. Indication of immediate medical attention and special treatment needed, if necessary:

Unless otherwise noted in Notes to Physician, no specific treatment noted; treat symptomatically.

5. FIREFIGHTING MEASURES

Extinguishing media (suitable):

Water spray, Carbon dioxide (CO₂), Foam, Dry chemical

Extinguishing media (unsuitable):

High volume water jet

Protective equipment:

Fire fighters and others who may be exposed to products of combustion should wear full fire fighting turn out gear (full Bunker Gear) and self-contained breathing apparatus (pressure demand / NIOSH approved or equivalent). Fire fighting equipment should be thoroughly decontaminated after use.

Further firefighting advice:

Cool closed containers exposed to fire with water spray.
Vapors are heavier than air and may travel along the ground or be moved by ventilation and ignited by heat, pilot lights, and other flames and ignition sources at locations distant from material handling point.
Do not use a solid water stream as it may scatter and spread fire.
After a fire, wait until the material has cooled to room temperature before initiating clean-up activities.
Closed containers of this material may explode when subjected to heat from surrounding fire.

Fire and explosion hazards:

When burned, the following hazardous products of combustion can occur:
Carbon oxides
Hazardous organic compounds

6. ACCIDENTAL RELEASE MEASURES**Personal precautions, Emergency procedures, Methods and materials for containment/clean-up:**

Prevent further leakage or spillage if you can do so without risk. Evacuate area of all unnecessary personnel. Ventilate the area. Eliminate all ignition sources. Avoid generation of vapors. Contain and collect spillage with non-combustible absorbent material such as sodium bicarbonate, sodium carbonate, calcium carbonate, clean sand or non-acidic clay and then wet down (dampen) the mixture with water. Sweep or scoop up using non-sparking tools and place into suitable properly labeled containers for prompt disposal. The sweepings should be wetted down further with water. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Consult a regulatory specialist to determine appropriate state or local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent environmental permits.

Protective equipment:

Appropriate personal protective equipment is set forth in Section 8.

7. HANDLING AND STORAGE**Handling****General information on handling:**

Keep away from heat, sparks and flames.

Avoid breathing vapor or mist.

Avoid contact with the skin, eyes and clothing.

Do not enter confined spaces unless adequately ventilated.

Keep container closed.

Use only with adequate ventilation.

Wash thoroughly after handling.

Check that all equipment is properly grounded and installed to satisfy electrical classification requirements.

Container hazardous when empty.

Emptied container retains vapor and product residue.

Follow label warnings even after container is emptied.

RESIDUAL VAPORS MAY EXPLODE ON IGNITION.

Improper disposal or reuse of this container may be dangerous and/or illegal.

DO NOT CUT, DRILL, GRIND, OR WELD ON OR NEAR THIS CONTAINER.

Storage**General information on storage conditions:**

Store in well ventilated area away from heat and sources of ignition such as flame, sparks and static electricity.

Ensure that all storage and handling equipment is properly grounded and installed to satisfy electrical classification requirements. Static electricity may accumulate when transferring material. All metal and groundable storage containers, including but not limited to drums, cylinders, Returnable Intermodal Bulk Containers (RIBCs) and Class C Flexible Intermodal Bulk Containers (FIBCs) must be bonded and grounded during filling and emptying operations. Observe all federal, state and local regulations and National Fire Protection Association (NFPA) Codes which pertain to the specific local conditions of storage and use, including OSHA 29 CFR 1910.106 and NFPA 30, 70, 77, and 497.

Storage incompatibility – General:

Store separate from: Acid catalysts (sulphuric acid, hydrochloric acid, oxalic acid)

Iodine

Bases

Acetic anhydride

Hydrogen peroxide (concentrated solutions)

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Airborne Exposure Guidelines:****2-Pentanone, 4-hydroxy-4-methyl- (123-42-2)**

US. ACGIH Threshold Limit Values

Time weighted average 50 ppm

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

PEL: 50 ppm (240 mg/m³)

Only those components with exposure limits are printed in this section. Limits with skin contact designation above have skin contact effect. Air sampling alone is insufficient to accurately quantitate exposure. Measures to prevent significant cutaneous absorption may be required. Limits with a sensitizer designation above mean that exposure to this material may cause allergic reactions.

Engineering controls:

Investigate engineering techniques to reduce exposures below airborne exposure limits or to otherwise reduce exposures. Provide ventilation if necessary to minimize exposures or to control exposure levels to below airborne exposure limits (if applicable see above). If practical, use local mechanical exhaust ventilation at sources of air contamination such as open process equipment.

Consult ACGIH ventilation manual or NFPA Standard 91 for design of exhaust systems. Monitor carbon monoxide and oxygen levels in tanks and enclosed spaces.

Respiratory protection:

Avoid breathing vapor or mist. Where airborne exposure is likely or airborne exposure limits are exceeded (if applicable, see above), use NIOSH approved respiratory protection equipment appropriate to the material and/or its components (full facepiece recommended). Consult respirator manufacturer to determine appropriate type equipment for a given application. Observe respirator use limitations specified by NIOSH or the manufacturer. For emergency and other conditions where there may be a potential for significant exposure or where exposure limit may be significantly exceeded, use an approved full face positive-pressure, self-contained breathing apparatus or positive-pressure airline with auxiliary self-contained air supply. Respiratory protection programs must comply with 29 CFR § 1910.134.

Skin protection:

Wear appropriate chemical resistant protective clothing and chemical resistant gloves to prevent skin contact. Consult glove manufacturer to determine appropriate type glove material for given application. Wear face shield and chemical resistant clothing such as a rubber apron when splashing may occur. Rinse immediately if skin is contaminated. Wash contaminated clothing and clean protective equipment before reuse. Wash thoroughly after handling.

Eye protection:

Where there is potential for eye contact, wear chemical goggles and have eye flushing equipment immediately available.

9. PHYSICAL AND CHEMICAL PROPERTIES

Color:	colourless
Physical state:	liquid
Odor:	mint-like
Odor threshold:	No data available
Flash point	142 - 147 °F (61 - 64 °C) (closed cup)
Auto-ignition temperature:	1,189 °F (643 °C)

Lower flammable limit (LFL):	1.8 %(V)
Upper flammable limit (UFL):	6.9 %(V)
pH:	Not applicable
Density:	938.7 kg/m ³ (68 °F (20 °C))
Specific Gravity (Relative density):	0.9 (68 °F (20 °C))Water=1 (liquid)
Vapor pressure:	1.65 mmHg (77 °F (25 °C))
Vapor density:	4.0 kg/m ³
Boiling point/boiling range:	334.2 °F (167.9 °C)
Melting point/range:	-47 °F (-44 °C)
Freezing point:	No data available.
Evaporation rate:	No data available
Solubility in water:	68 °F (20 °C) completely miscible
Solubility in other solvents: [qualitative and quantitative]	miscible with most organic solvents
Viscosity, dynamic:	2.798 mPa.s 77 °F (25 °C)
Oil/water partition coefficient:	No data available
Thermal decomposition	No data available
Flammability:	See GHS Classification in Section 2

10. STABILITY AND REACTIVITY

Stability:

This material is chemically stable under normal and anticipated storage, handling and processing conditions.

Hazardous reactions:

None known.

Materials to avoid:

Risk of violent reaction.
Acid catalysts (sulphuric acid, hydrochloric acid, oxalic acid)
Bases
(sensitive reaction)
Acetic anhydride

Hydrogen peroxide (concentrated solutions)

Conditions / hazards to avoid:

Keep away from heat and sources of ignition.

Hazardous decomposition products:

Thermal decomposition giving flammable and toxic products :
Carbon oxides

- Formation of :
Acetone
According to the presence of
Alkali metals

- Formation of :
mesityl oxide
According to the presence of
Iodine

11. TOXICOLOGICAL INFORMATION**Data for DIACETONE ALCOHOL****Acute toxicity****Oral:**

May be harmful if swallowed. (rat) LD50 = 3,002 mg/kg.

Dermal:

No deaths occurred. (rat) LD0 = 1,875 mg/kg.

Practically nontoxic. (rabbit) LD50 = 13,750 mg/kg.

Inhalation:

No deaths occurred. (rat) 4 h LC0 = 7.6 mg/l. (vapor)

Specific target organ toxicity - single exposure:

Irritating to respiratory system.

Skin Irritation:

Practically non-irritating. (rabbit)

Eye Irritation:

Causes eye irritation. (rabbit)

Skin Sensitization:

Not a sensitizer. Guinea pig maximization test. (guinea pig) No skin allergy was observed

Repeated dose toxicity

Repeated inhalation administration to rat / signs: respiratory irritation

Repeated oral administration to rat / affected organ(s): kidney, liver / signs: changes in organ structure or function, changes in motor activity

Genotoxicity

Assessment in Vitro:

No genetic changes were observed in laboratory tests using: bacteria, animal cells

Developmental toxicity

Reproductive/Developmental Effects Screening Assay. Oral (rat) / No birth defects were observed. ((doses also caused effects in the mothers), reduced body weight, increased mortality in the offspring, smaller litter sizes)

Reproductive effects

Reproductive/Developmental Effects Screening Assay. oral (rat) / decreased fertility / (toxic effects also observed in the parental animals at these doses)

Human experience

Inhalation:

Upper respiratory tract: irritation.

Systemic effects: Discomfort, headache, nausea, vomiting.

Skin contact:

Skin: Prolonged or repeated contact may dry skin and cause irritation, dermatitis.

Eye contact:

Eyes: irritating. (vapor) (studied using human volunteers)

12. ECOLOGICAL INFORMATION

Chemical Fate and Pathway

Data on this material and/or a similar material are summarized below.

Data for DIACETONE ALCOHOL

Biodegradation:

Readily biodegradable. (14 d) biodegradation 100 %

Octanol Water Partition Coefficient:

log Pow = -0.09

Ecotoxicology

Data on this material and/or a similar material are summarized below.

Data for DIACETONE ALCOHOL

Aquatic toxicity data:

Practically nontoxic. *Oryzias latipes* 96 h LC50 > 100 mg/l

Aquatic invertebrates:

Practically nontoxic. *Daphnia magna* (Water flea) 48 h EC50 > 1,000 mg/l

Algae:

Practically nontoxic. Pseudokirchneriella subcapitata (green algae) 72 h EC50 > 1,000 mg/l

Microorganisms:

Activated sludge 3 h EC50 > 1,000 mg/l

Chronic toxicity to aquatic invertebrates:

Practically nontoxic. Daphnia magna (Water flea) 21 d NOEC = 100 mg/l

13. DISPOSAL CONSIDERATIONS

Waste disposal:

Disposal via incineration is recommended. Dispose of in accordance with federal, state and local regulations. Consult a regulatory specialist to determine appropriate state or local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent environmental permits. Note: Chemical additions to, processing of, or otherwise altering this material may make this waste management information incomplete, inaccurate, or otherwise inappropriate. Furthermore, state and local waste disposal requirements may be more restrictive or otherwise different from federal laws and regulations.

14. TRANSPORT INFORMATION

US Department of Transportation (DOT): not regulated

Special Shipping Information: Bulk Shipment: NA 1993, Combustible Liquid, NOS (Diacetone Alcohol), Combustible Liquid, PGIII

International Maritime Dangerous Goods Code (IMDG): not regulated

15. REGULATORY INFORMATION

Chemical Inventory Status

EU. EINECS	EINECS	Conforms to
United States TSCA Inventory	TSCA	The components of this product are all on the TSCA Inventory.
Canadian Domestic Substances List (DSL)	DSL	All components of this product are on the Canadian DSL
China. Inventory of Existing Chemical Substances in China (IECSC)	IECSC (CN)	Conforms to
Japan. ENCS - Existing and New Chemical Substances Inventory	ENCS (JP)	Conforms to
Japan. ISHL - Inventory of Chemical Substances	ISHL (JP)	Conforms to
Korea. Korean Existing Chemicals Inventory (KECI)	KECI (KR)	Conforms to

Philippines Inventory of Chemicals and Chemical Substances (PICCS) PICCS (PH) Conforms to

Australia Inventory of Chemical Substances (AICS) AICS Conforms to

United States – Federal Regulations

SARA Title III – Section 302 Extremely Hazardous Chemicals:

The components in this product are either not SARA Section 302 regulated or regulated but present in negligible concentrations.

SARA Title III - Section 311/312 Hazard Categories:

Acute Health Hazard, Fire Hazard

SARA Title III – Section 313 Toxic Chemicals:

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) - Reportable Quantity (RQ):

<u>Chemical name</u>	<u>CAS-No.</u>	<u>Reportable quantity</u>
3-Penten-2-one, 4-methyl-	141-79-7	100 lbs
2-Propanone	67-64-1	5000 lbs

United States – State Regulations

New Jersey Right to Know

<u>Chemical name</u>	<u>CAS-No.</u>
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2

Pennsylvania Right to Know

<u>Chemical name</u>	<u>CAS-No.</u>
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2

California Prop. 65

This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive defects.

16. OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3.

H227 Combustible liquid.
H320 Causes eye irritation.
H335 May cause respiratory irritation.

Miscellaneous:

Other information: Refer to National Fire Protection Association (NFPA) Codes 30, 70, 77, and 497 and OSHA 29 CFR 1910.106, for safe handling.

Latest Revision(s):

Reference number: 000000032112
Date of Revision: 07/21/2016
Date Printed: 07/22/2016

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It is the sole responsibility of the manufacturer of the medical device to determine the suitability (including biocompatibility) of all raw materials, products and components, including any medical grade Arkema products, in order to ensure that the final end-use product is safe for its end use; performs or functions as intended; and complies with all applicable legal and regulatory requirements (FDA or other national drug agencies) It is the sole responsibility of the manufacturer of the medical device to conduct all necessary tests and inspections and to evaluate the medical device under actual end-use requirements and to adequately advise and warn purchasers, users, and/or learned intermediaries (such as physicians) of pertinent risks and fulfill any postmarket surveillance obligations. Any decision regarding the appropriateness of a particular Arkema material in a particular medical device should be based on the judgment of the manufacturer, seller, the competent authority, and the treating physician.