

SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name	Diacetone Alcohol
CAS number	123-42-2
Synonyms	2-Methyl-2-pentanol-4-one; 4-Hydroxy-4-methyl-2-pentanone

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses	Laboratory Chemicals
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1.3 Details of the supplier of the safety data sheet

Company	Lab Alley, LLC 12501 Pauls Valley Road Austin, Texas 78737 U.S.A.
Telephone	512-668-9918
Fax	512-886-4008

1.4 Emergency telephone

Emergency Phone #	US & Canada: 1-800-535-5053	INFOTRAC
	International 1-352-323-3500	INFOTRAC

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable Liquids - Category 3
Serious Eye Damage - Category 2
Specific Target Organ Toxicity (single exposure) - Category 3
Target Organ(s) - Respiratory system

2.2 GHS Label elements, including precautionary statements

Pictogram	
Signal Word	Warning
Hazard statements	Flammable liquid and vapor. Causes serious eye irritation. May cause respiratory irritation.
Precautionary statements	Prevention: Wash face, hands, and any exposed skin thoroughly after handling. Do not breathe dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. Keep away from heat/sparks/open flames/hot surfaces. No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Wear protective gloves/protective clothing/eye protection/face protection. Keep cool. Response: Get medical attention/advice if you feel unwell. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention. Fire: In case of fire, use CO2, dry chemical, or foam for extinction. Storage: Store in a well-ventilated place. Keep container tightly closed. Store locked up. Disposal: Dispose of contents/container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

None identified.

SECTION 3: Composition/information on ingredients

3.1 Components

Chemical name	Common name and synonyms	CAS number	Concentration
Diacetone alcohol	2-Methyl-2-pentanol-4-one; 4-Hydroxy	123-42-2	>95%

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice

If inhaled	Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur.
In case of skin contact	Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.
In case of eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.
If swallowed	Clean mouth with water and drink afterwards plenty of water.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms of overexposure may be headache, dizziness, tiredness, nausea, and vomiting.

4.3 Indication of any immediate medical attention and special treatment needed

If symptoms persist, call a physician. Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	Water spray, Carbon dioxide (CO ₂), dry chemical, alcohol-resistant foam. Water mist maybe used to cool closed containers
Unsuitable extinguishing media	No information available.

5.2 Specific hazards arising from the substance or mixture

Containers may explode when heated. Flammable. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back.

Hazardous Combustion Products: Carbon monoxide (CO). Carbon dioxide (CO₂).

5.3 Special protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

5.4 Further information

Flash Point	56 °C / 132.8 °F Closed Cup
Autoignition Temperature	643 °C / 1189.4 °F
Explosion limits	
Upper	6.90%

Lower 1.80%

Sensitivity to Mechanical Impact

No information available.

Sensitivity to Static Discharge

No information available.

NFPA

Health	Flammability	Instability	Physical hazards
2	2	0	N/A

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment as required. Ensure adequate ventilation. Remove all sources of ignition. Take precautionary measures against static discharges.

6.2 Environmental precautions

Should not be released into the environment.

6.3 Methods and materials for containment and cleaning up

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

6.4 Reference to other sections

See Section 2 for full list of hazard and precaution statements.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation. Ensure adequate ventilation. Keep away from open flames, hot surfaces, and sources of ignition. Use only non-sparking tools. Take precautionary measures against static discharges.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Keep containers tightly closed in a dry, cool, and well-ventilated place. Keep away from heat, sparks, and flame.

Incompatibilities

Strong oxidizing agents. Alcohols. Amines. Acids. Strong bases.

SECTION 8: Exposure controls/personal protection

8.1 Occupational exposure limits

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

Component	Type	Value
Diacetone alcohol	(Vacated) TWA	50 ppm, 240 mg/m ³
	TWA	50 ppm, 240 mg/m ³

US. ACGIH Threshold Limit Values

Component	Type	Value
Diacetone alcohol	TWA	50 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Component	Type	Value
Diacetone alcohol	IDLH	1800 ppm
	TWA	50 ppm, 240 mg/m ³

Biological occupational exposure limits

No information available.

8.2 Exposure controls

Appropriate engineering controls

Ensure that eyewash stations and safety showers are close to the workstation location.
Ensure adequate ventilation, especially in confined areas. Use explosion-proof electrical/ventilating/lighting equipment.

Personal protective equipment

Eye/face protection

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166. Tight sealing safety goggles. Face protection shield

Skin protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

Body Protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment.

Control of environmental exposure

No information available.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical State	Liquid
Appearance	Clear
Odor	Faint/Pleasant/Minty
Odor Threshold	0.27-1.1ppm
pH	No information available
Melting Point/Range	-44 °C/-47.2 °F
Boiling Point/Range	167.9 °C/334.2 °F
Evaporation Rate	No information available
Flammability (solid)	No information available
Flammability or explosive limit	
Upper	6.90%
Lower	1.80%
Vapor Pressure	0.129 kPa @ 20°C
Vapor Density	4
Density	No information available
Solubility	Miscible
Partition coefficient; n-octanol/water	-0.098
Autoignition Temp	643 °C/1189.4 °F
Decomposition Temp	No information available
Viscosity	No information available
Molecular Formula	C6 H12 O2
Molecular Weight	116.16 g/mol
VOC Content(%)	No information available
Oxidizing properties	No information available

9.2 Other safety information No information available

SECTION 10: Stability and reactivity

10.1 Reactivity

No information available

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

None under normal processing.

10.4 Conditions to avoid

Incompatible products. Excess heat. Keep away from open flames, hot surfaces, and sources of ignition.

10.5 Incompatible materials

Strong oxidizing agents, Alcohols, Amines, Acids, Strong bases.

10.6 Hazardous decomposition products

Carbon monoxide (CO), Carbon dioxide (CO₂).

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Product Information, Component Information

Acute toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Diacetone alcohol	>4 g/kg (Rat)	13500 mg/kg (Rabbit)	>7.23 g/m ³ (Rat) 8h

Skin corrosion/irritation

No information available.

Serious eye damage/eye irritation

Irritating to eyes.

Respiratory or skin sensitization

No information available.

Germ cell mutagenicity

Not mutagenic in AMES Test.

Carcinogenicity

Component	CAS	IARC	NTP	ACGIH	OSHA	Mexico
Diacetone alcohol	123-42-2	Not listed	Not listed	Not listed	Not listed	Not listed

Specific target organ toxicity - single exposure

Respiratory system.

Specific target organ toxicity - repeated exposure

None known.

Reproductive toxicity

No information available.

Chronic effects

Symptoms of overexposure may be headache, dizziness, tiredness, nausea, and vomiting.

11.2 Additional Information

The toxicological properties have not been fully investigated.

SECTION 12: Ecological information

12.1 Toxicity

Product		Species	Test Results
Diacetone alcohol	LC50	Lepomis macrochirus	420 mg/L, 96h static
	EC50	Daphnia magna	8750 mg/L, 24h

12.2 Persistence and degradability

Miscible with water. Persistence is unlikely based on information available.

12.3 Bio accumulative potential

No information available.

12.4 Mobility in soil

Will likely be mobile in the environment due to its water solubility.

12.5 Results of PBT and vPvB assessment

No information available.

12.6 Endocrine disrupting properties

No information available.

12.7 Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1 Waste Disposal Methods

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

SECTION 14: Transport information

DOT (US)

UN Number	UN1148
Proper Shipping name	DIACETONE ALCOHOL
Hazard Class	3

Packaging Group III

IMDG

UN Number UN1148
Proper Shipping name DIACETONE ALCOHOL
Hazard Class 3
Packaging Group III

IATA

UN Number UN1148
Proper Shipping name DIACETONE ALCOHOL
Hazard Class 3
Packaging Group III

SECTION 15: Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
Not applicable.

CERCLA Hazardous Substance List (40 CFR 302.4)
Not listed.

SARA 304 Emergency release notification
Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)
Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance
Not listed.

SARA 311/312 Hazardous
See Section 2 for more information.

SARA 313 (TRI reporting)
Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List
Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
Not regulated.

Safe Drinking Water Act
Not regulated.

FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace
Not listed.

US state regulations

US. Massachusetts RTK - Substance List
Listed, Diacetone alcohol (CAS #123-42-2).

US. New Jersey Worker and Community Right-to-Know Act
Listed, Diacetone alcohol (CAS #123-42-2).

US. Pennsylvania Worker and Community Right-to-Know Law
Listed, Diacetone alcohol (CAS #123-42-2).

California Proposition 65
Not listed.

SECTION 16: Other information

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SECTION 17: Disclaimer

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.