

SECTION 1 Identification

1.1. Product identifier

Product form : Substance
 Trade name : Diacetone Alcohol
 CAS-No. : 123-42-2
 Product code : HP-040747 FP
 Formula : C6H12O2

1.2. Other means of identification

Synonyms : 4-Hydroxy-4-methyl pentan-2-one / 4-Hydroxy-4-methyl-2-pentanone / 4-Hydroxy-4-methylpentanone-2 / Pentan-2-one, 4-hydroxy-4-methyl- / 2-Pentanone, 4-hydroxy-4-methyl- / 4-Hydroxy-4-methylpentan-2-one / DIACETONE ALCOHOL / 4-Hydroxy-4-methyl pentan-2-one alcohol / 4-Hydroxy-4-methyl-pentane-2-on / Diacetone
 EC Index No. (Report) : 603-016-00-1
 EC-No. : 204-626-7

1.3. Recommended use of the chemical and restrictions on use

Use of the substance/mixture : Solvent

1.4. Supplier's details

Monument Chemical
 16717 Jacintoport Blvd.
 Houston, TX, 77015
 USA
 T 832-376-2000
sds@monumentchemical.com - www.monumentchemical.com

1.5. Emergency phone number

Emergency number : 24 HR CHEMTREC: 1-800-424-9300 (International +1 703-741-5970); 24 HR Emergency Assistance: 1-832-376-2026

SECTION 2 Hazard Identification

2.1. Classification of the substance or mixture

GHS US classification

Flammable liquid, Category 4	H227	Combustible liquid.
Serious eye damage/eye irritation, Category 2	H319	Causes serious eye irritation.
Reproductive toxicity, Category 2	H361	Suspected of damaging fertility or the unborn child.
Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation	H335	May cause respiratory irritation.

Full text of H statements : see section 16

2.2. Label elements

GHS US labeling

Hazard pictograms (GHS US) : 

Signal word (GHS US) : Warning

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according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS)

Hazard statements (GHS US)	: H227 - Combustible liquid H319 - Causes serious eye irritation H335 - May cause respiratory irritation H361 - Suspected of damaging fertility or the unborn child
Precautionary statements (GHS US)	: P201 - Obtain special instructions before use. P202 - Do not handle until all safety precautions have been read and understood. P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P261 - Avoid breathing dust, fume, gas, mist, vapors, spray. P264 - Wash hands thoroughly after handling. P271 - Use only outdoors or in a well-ventilated area. P280 - Wear eye protection, protective clothing, protective gloves. P304+P340 - If inhaled: Remove person to fresh air and keep 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. P308+P313 - If exposed or concerned: Get medical advice/attention. P312 - Call a doctor, a POISON CENTER if you feel unwell. P337+P313 - If eye irritation persists: Get medical advice or attention. P370+P378 - In case of fire: Use alcohol resistant foam, carbon dioxide (CO ₂), dry extinguishing powder, Water spray to extinguish. P403 - Store in a well-ventilated place. P403+P233 - Store in a well-ventilated place. Keep container tightly closed. P405 - Store locked up. P501 - Dispose of hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulations.

2.3. Hazards associated with known or reasonably anticipated uses

No additional information available

2.4. Hazards not otherwise classified

No additional information available

2.5. Unknown acute toxicity

No additional information available

SECTION 3 Composition/information on ingredients

3.1. Substances

Name	Product identifier	%
Diacetone alcohol (Main constituent)	CAS-No.: 123-42-2	≥ 99

Full text of hazard classes and H-statements : see section 16

3.2. Mixtures

Not applicable

SECTION 4 First aid measures

4.1. Description of necessary first-aid measures

First-aid measures general : Call a poison center/doctor/physician if you feel unwell. Never give anything by mouth to an unconscious person. IF exposed or concerned: Get medical advice/attention.

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First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor/physician if you feel unwell. 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.
First-aid measures after skin contact	: Wash skin with plenty of water. Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.
First-aid measures after eye contact	: 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. Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists.
First-aid measures after ingestion	: Call a poison center/doctor/physician if you feel unwell. Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

4.2. Most important symptoms/effects, acute and delayed

Potential Adverse human health effects and symptoms	: Based on available data, the classification criteria are not met.
Symptoms/effects after inhalation	: May cause respiratory irritation.
Symptoms/effects after eye contact	: Eye irritation.

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

Other medical advice or treatment	: Treat symptomatically.
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SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media	: Foam. Dry powder. Carbon dioxide. Water spray. Sand.
Unsuitable extinguishing media	: Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

Fire hazard	: Combustible liquid.
Explosion hazard	: May form flammable/explosive vapor-air mixture.
Hazardous decomposition products in case of fire	: Toxic fumes may be released.

5.3. Special protective equipment and precautions for fire-fighters

Precautionary measures fire	: Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to fire/heat: seal off low-lying areas. Exposure to fire/heat: have neighbourhood close doors and windows.
Firefighting instructions	: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing. Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6 Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Remove ignition sources. Use special care to avoid static electric charges. No open flames. No smoking.
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For non-emergency personnel

Emergency procedures	: Ventilate spillage area. No open flames, no sparks, and no smoking. Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid contact with skin and eyes. Evacuate unnecessary personnel.
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For emergency responders

Protective equipment	: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection". Equip cleanup crew with proper protection.
Emergency procedures	: Ventilate area.
Environmental precautions	: Avoid release to the environment. Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.2. Methods and materials for containment and cleaning up

Methods for cleaning up	: Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.
Other information	: Dispose of materials or solid residues at an authorized site.

For further information refer to section 13. See Heading 8. Exposure controls and personal protection.

SECTION 7 Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Wear personal protective equipment. Avoid contact with skin and eyes. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. No open flames. No smoking. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid breathing dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area.
Hygiene measures	: Do not eat, drink or smoke when using this product. Always wash hands after handling the product.
Additional hazards when processed	: Handle empty containers with care because residual vapors are flammable. Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

7.2. Conditions for safe storage, including incompatibilities

Technical measures	: Proper grounding procedures to avoid static electricity should be followed.
Storage conditions	: Store in a well-ventilated place. Keep cool. Store locked up. Keep only in the original container in a cool, well ventilated place away from : Keep in fireproof place. Keep container tightly closed.
Incompatible products	: Strong bases. Strong acids.
Incompatible materials	: Sources of ignition. Direct sunlight. Heat sources.

SECTION 8 Exposure controls/personal protection

8.1. Control parameters

Diacetone alcohol (123-42-2)	
USA - ACGIH® - Threshold Limit Values	
Local name	Diacetone alcohol
ACGIH® TLV® TWA	10 ppm
Remark (ACGIH®)	TLV® Basis: Eye & URT irr; CNS impair
Regulatory reference	ACGIH 2025

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Diacetone alcohol (123-42-2)	
USA - OSHA - Occupational Exposure Limits	
Local name	(4-Hydroxy-4-methyl-2-pentanone)
OSHA PEL TWA	240 mg/m ³
	50 ppm
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1
USA - IDLH - Occupational Exposure Limits	
IDLH	1800 ppm (10% LEL)
USA - NIOSH - Occupational Exposure Limits	
NIOSH REL (TWA)	240 mg/m ³
	50 ppm

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.
Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures, such as personal protective equipment

Personal protective equipment:

Avoid all unnecessary exposure.

Hand protection:

Protective gloves. Wear protective gloves.

Eye protection:

Safety glasses. Chemical goggles or safety glasses

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment. Wear appropriate mask

Personal protective equipment symbol(s):



Other information:

Do not eat, drink or smoke during use.

SECTION 9 Physical and chemical properties

9.1. Basic physical and chemical properties

Physical state : Liquid
Appearance : Colorless liquid. Turns yellow on aging.
Color : Colorless Yellow
Odor : pleasant Sweet
Odor threshold : 0.3 ppm
pH : No data available

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Melting point	: Not applicable
Freezing point	: -47 °C ; -52.6 °F
Boiling point	: 168 °C ; 334.4 °F
Flash point	: 61 – 65.6 °C ; 142 - 150°F closed cup
Flammability (solid, gas)	: Not applicable.
Vapor pressure	: 0.97 mm Hg @20C
Relative vapor density at 20°C	: 4
Relative density	: 0.93 (at 25 °C)
Density	: 0.94 g/cm ³ (at 20 °C)
Molecular mass	: 116.2 g/mol
Solubility	: Soluble in water.
Partition coefficient n-octanol/water (Log Pow)	: 1.03
Auto-ignition temperature	: 640 °C ; 1184 °F
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Explosion limits	: 1.8 – 6.9 vol % Lower explosion limit: 1.8 vol % Upper explosion limit: 6.9 vol %
Particle characteristics	: No data available

9.2. Data relevant with regard to physical hazard classes (supplemental)

No additional information available

SECTION 10 Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions. Combustible liquid. May form flammable/explosive vapor-air mixture.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use. Not established.

10.4. Conditions to avoid

Avoid contact with hot surfaces. No flames, no sparks. Eliminate all sources of ignition. Direct sunlight. Extremely high or low temperatures. Open flame. Overheating. Heat. Sparks.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. fume. Carbon monoxide. Carbon dioxide. May release flammable gases.

SECTION 11 Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

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Diacetone alcohol (123-42-2)	
LD50 oral rat	> 4 g/kg
LD50 dermal rat	> 1875 mg/kg body weight (Equivalent or similar to OECD 402, 24 h, Rat, Male/female, Experimental value)
Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Suspected of damaging fertility or the unborn child.
STOT-single exposure	: May cause respiratory irritation.
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified
Potential Adverse human health effects and symptoms	: Based on available data, the classification criteria are not met.
Symptoms/effects after inhalation	: May cause respiratory irritation.
Symptoms/effects after eye contact	: Eye irritation.

SECTION 12 Ecological information

12.1. Ecotoxicity

Ecology - general	: The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.
Ecology - water	: Not harmful to crustacea (Daphnia). Slightly harmful to fishes. Groundwater pollutant. Inhibition of activated sludge. Not harmful to algae. Slightly harmful to bacteria.
Hazardous to the aquatic environment, short-term (acute)	: Not classified
Hazardous to the aquatic environment, long-term (chronic)	: Not classified

Diacetone alcohol (123-42-2)	
LC50 - Fish [1]	420 mg/l (Exposure time: 96 h - Species: <i>Lepomis macrochirus</i> [static])
LC50 - Fish [2]	420 mg/l (Exposure time: 96 h - Species: <i>Lepomis macrochirus</i>)
EC50 72h - Algae [1]	> 1000 mg/l Test organisms (species): <i>Pseudokirchneriella subcapitata</i> (previous names: <i>Raphidocelis subcapitata</i> , <i>Selenastrum capricornutum</i>)

12.2. Persistence and degradability

Diacetone alcohol (123-42-2)	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

Diacetone alcohol (123-42-2)	
Partition coefficient n-octanol/water (Log Pow)	1.03
Bioaccumulative potential	Not established.

12.4. Mobility in soil

No additional information available

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12.5. Other adverse effects

Ozone	: Not classified
Fluorinated greenhouse gases	: No
Other information	: Avoid release to the environment.

SECTION 13 Disposal considerations

Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Product/Packaging disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.
Additional information	: Handle empty containers with care because residual vapors are flammable.
Ecological waste information	: Avoid release to the environment.

SECTION 14 Transport information

In accordance with DOT / IMDG / IATA

14.1. UN number

UN-No. (DOT)	: NA1993
UN-No. (IMDG)	: Not regulated
UN-No. (IATA)	: Not regulated

14.2. UN Proper Shipping Name

Proper Shipping Name (DOT)	: Combustible liquid, n.o.s. (Diacetone Alcohol)
Proper Shipping Name (IMDG)	: Not regulated
Proper Shipping Name (IATA)	: Not regulated
Transport document description (DOT)	: NA1993 Combustible liquid, n.o.s. (Diacetone Alcohol), 3, III

14.3. Transport hazard class(es)

DOT	
Transport hazard class(es) (DOT)	: Combustible liquid

IMDG	
Transport hazard class(es) (IMDG)	: Not regulated

IATA	
Transport hazard class(es) (IATA)	: Not regulated

14.4. Packing group

Packing group (DOT)	: III
Packing group (IMDG)	: Not regulated
Packing group (IATA)	: Not regulated

14.5. Environmental hazards

Other information	: No supplementary information available.
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14.6. Transport in bulk

Not applicable

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14.7. Special precautions for user

DOT

UN-No. (DOT)	: NA1993
DOT Special Provisions (49 CFR 172.102)	: IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672). T1 - 1.5 178.274(d)(2) Normal..... 178.275(d)(2) T4 - 2.65 178.274(d)(2) Normal..... 178.275(d)(3) TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = $97 / 1 + a (tr - tf)$ Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.
DOT Packaging Exceptions (49 CFR 173.xxx)	: 150
DOT Packaging Non Bulk (49 CFR 173.xxx)	: 203
DOT Packaging Bulk (49 CFR 173.xxx)	: 241
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	: 60 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	: 220 L
DOT Vessel Stowage Location	: A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.

IMDG

Not regulated

IATA

Not regulated

SECTION 15 Regulatory information

15.1. Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

This product or mixture is not known to contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

15.2. International regulations

CANADA

Diacetone alcohol (123-42-2)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

Diacetone alcohol (123-42-2)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

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National regulations

Diacetone alcohol (123-42-2)

Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on KECL/KECI (Korean Existing Chemicals Inventory)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on the Japanese ISHL (Industrial Safety and Health Law)
Listed on INSQ (Mexican National Inventory of Chemical Substances)
Listed on the TCSI (Taiwan Chemical Substance Inventory)
Listed on the NCI (Vietnam - National Chemical Inventory)

15.3. State regulations

Diacetone alcohol (123-42-2)

State or local regulations	U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List U.S. - Massachusetts - Right To Know List U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Emission Levels (ELs) U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations
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California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16 Other information

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS)

Revision date : 1/21/2026
Issue date : 1/21/2026
Other information : None.

Full text of hazard classes and H-statements

H227	Combustible liquid
H319	Causes serious eye irritation
H335	May cause respiratory irritation
H361	Suspected of damaging fertility or the unborn child

Safety Data Sheet (SDS), USA

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