

Diacetone Alcohol

SDS Revision Date (mm/dd/yyyy): 12/11/2015

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SECTION 1. IDENTIFICATION

Product identifier used on the label

: **Diacetone Alcohol**

Other means of identification : Not available.

Recommended use of the chemical and restrictions on use

: Solvent; Reagent
Use pattern: Professional Use Only
Restriction on use: None known

Chemical family : Pure substance

Name, address, and telephone number
of the supplier:

Comet Chemical Company Ltd.

3463 Thomas Street
Innisfill, ON, Canada
L9S 3W4

Supplier's Telephone # : 705-436-5580

24 Hr. Emergency Tel # : GFL Environmental - 1-888-772-2543

Name, address, and telephone number of
the manufacturer:

Refer to supplier

SECTION 2. HAZARDS IDENTIFICATION

Classification of the chemical

Clear colourless liquid. Sweet odour.

This material is classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015).

Hazard classification:

Flammable Liquids - Category 3

Eye irritation - Category 2A

Specific target organ toxicity, single exposure - Category 3 (respiratory)

Specific target organ toxicity, single exposure - Category 3 (narcotic effects)

Label elements

Hazard pictogram(s)



Signal Word

DANGER!

Hazard statement(s)

Flammable liquid and vapour.
Causes serious eye irritation.
May cause respiratory irritation.
May cause drowsiness or dizziness.

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Precautionary statement(s)

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No Smoking
Keep container tightly closed.
Ground and bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting/equipment.
Use non-sparking tools.
Take action to prevent static discharges.
Avoid breathing mist or vapours.
Wash thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Wear protective gloves and eye/face protection.

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.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Call a POISON CENTER or doctor/physician if you feel unwell.
In case of fire: Use water fog, dry chemical, CO₂ or 'alcohol' foam to extinguish.

Store in a well-ventilated place. Keep cool.
Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

Other hazards

Other hazards which do not result in classification: Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Direct skin contact may cause slight or mild, transient irritation.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance

<u>Chemical name</u>	<u>Common name and synonyms</u>	<u>CAS #</u>	<u>Concentration (% by weight)</u>
Diacetone	4-Hydroxy-4-methylpentan-2-one	123-42-2	100.00

SECTION 4. FIRST-AID MEASURES

Description of first aid measures

- Ingestion* : Call a physician or poison control centre immediately. Do not induce vomiting. If vomiting occurs spontaneously, keep victim's head lowered (forward) to reduce the risk of aspiration. Never give anything by mouth to an unconscious person.
- Inhalation* : If inhaled, move to fresh air. If breathing is difficult, give oxygen by qualified medical personnel only. If breathing has stopped, give artificial respiration. Get medical attention if symptoms persist.
- Skin contact* : Wash off with soap and plenty of water. If irritation or symptoms develop, seek medical attention. Wash contaminated clothing before re-use.
- Eye contact* : Immediately flush eyes with running water for at least 15 minutes. Obtain medical attention if irritation persists.

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Most important symptoms and effects, both acute and delayed

- : Causes serious eye irritation. Symptoms may include redness, pain, tearing and conjunctivitis. Direct skin contact may cause slight or mild, transient irritation. May cause respiratory irritation. Symptoms may include upper respiratory irritation, coughing and breathing difficulties. May cause central nervous system effects. Symptoms may include pain, headache, nausea, vomiting, dizziness, drowsiness and other central nervous system effects. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Indication of any immediate medical attention and special treatment needed

- : Treat symptomatically. This product is a CNS depressant.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing media

Suitable extinguishing media

- : Use water fog or fine spray, foams, carbon dioxide or dry chemical. Do not use a solid water stream as it may scatter and spread fire.

Unsuitable extinguishing media

- : Do not use a solid water stream as it may scatter and spread fire.

Special hazards arising from the substance or mixture / Conditions of flammability

- : Flammable liquid and vapour. Vapors may travel considerable distance to a source of ignition and flash back. Vapors are heavier than air and may spread along floors. Static discharge, impact, friction, and heat may ignite exposed chemical material.

Flammability classification (OSHA 29 CFR 1910.106)

- : Flammable Liquids - Category 3

Hazardous combustion products

- : Carbon monoxide, carbon dioxide, toxic vapours, gases or particulates.

Special protective equipment and precautions for firefighters

Protective equipment for fire-fighters

- : Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

Special fire-fighting procedures

- : Fight fires from a safe distance. Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode. Move containers from fire area if safe to do so. Water spray may be useful in cooling equipment exposed to heat and flame.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

- : Restrict access to area until completion of clean-up. Ensure clean-up is conducted by trained personnel only. Individuals involved in the cleanup must wear appropriate personal protective equipment. For personal protection see section 8.

Environmental precautions : Ensure spilled product does not enter drains, sewers, waterways, or confined spaces. For large spills, dike the area to prevent spreading.

Methods and material for containment and cleaning up

- : Ventilate area of release. Stop spill or leak at source if safely possible. Dike for water control. Use only non-sparking tools and equipment in the clean-up process. Contain and absorb spilled liquid with inert, non-combustible absorbent material (e.g. sand, vermiculite), then place material into open, unsealed containers. For waste disposal, see Section 13 of the SDS.

Special spill response procedures

- : In Canada: For 24-hour emergency assistance, call: 1-613-996-6666 (CANUTEC). US CERCLA Reportable quantity (RQ): None.

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SECTION 7. HANDLING AND STORAGE

Precautions for safe handling

- : Use only in well-ventilated areas. Wear suitable protective equipment during handling. Avoid breathing vapours. Avoid contact with skin, eyes and clothing. Wash thoroughly after handling. Keep away from heat, sparks and open flames. Use only non-sparking tools with this material. Avoid contact with incompatible materials. Keep containers tightly closed when not in use. Empty containers retain residue (liquid and/or vapour) and can be dangerous. Do not use pressure to empty drums. Do not cut, weld, drill or grind on or near this container. Follow labeled warnings even after container is emptied.

- Conditions for safe storage** : Store in a cool, dry, well-ventilated area. Store away from incompatible materials. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. Inspect periodically for damage or leaks. No smoking in the area.

- Incompatible materials** : Strong oxidizers (e.g. Chlorine, Peroxides, etc.).

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

<u>Exposure Limits:</u>				
	<u>ACGIH TLV</u>		<u>OSHA PEL</u>	
	<u>TWA</u>	<u>STEL</u>	<u>PEL</u>	<u>STEL</u>
Diacetone	50 ppm	N/Av	50 ppm ; 240 mg/m ³	N/Av

Exposure controls

Ventilation and engineering measures

- : Ensure adequate ventilation, especially in confined areas. Use general or local exhaust ventilation to maintain air concentrations below recommended exposure limits.

Respiratory protection

- : Respiratory protection is required if the concentrations exceed the TLV. NIOSH-approved respirators are recommended. Advice should be sought from respiratory protection specialists. Respirators should be selected based on the form and concentration of contaminants in air, and in accordance with OSHA (29 CFR 1910.134) or CSA Z94.4-02.

Skin protection

- : Gloves impervious to the material are recommended. Advice should be sought from glove suppliers.

Eye / face protection

- : Chemical splash goggles are recommended. A full face shield may also be necessary.

Other protective equipment

- : An eyewash station and safety shower should be made available in the immediate working area. Depending on conditions of use, an impervious apron should be worn. Other equipment may be required depending on workplace standards.

General hygiene considerations

- : Avoid breathing vapour or mist. Avoid contact with skin, eyes and clothing. Do not ingest. Do not eat, drink or smoke when using this product. Upon completion of work, wash hands before eating, drinking, smoking or use of toilet facilities. Remove soiled clothing and wash it thoroughly before reuse.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- Physical State** : Liquid.
- Colour** : Clear , colourless
- Odour** : Sweet odour.
- Odour threshold** : < 1ppm

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pH : N/Av
Melting Point/Freezing point : -44°C (-47.2°F)
Initial boiling point and boiling range : 160-172°C (320-341.6°F)
Flash point : 58°C (136.4°F)
Flashpoint (Method) : Closed cup
Evaporation rate (BuAe = 1) : Not available.
Flammability : Not applicable.
Lower explosion or flammability limit (% by vol.) : 1.8%
Upper explosion or flammability limit (% by vol.) : 6.9%
Oxidizing properties : None.
Explosive properties : Not explosive
Vapour pressure : 1.1
Relative vapour density : 4
Relative density / Specific gravity : 0.94
Solubility in water : Complete
Other solubility(ies) : Soluble in most organic solvents (e.g. ethanol, acetone, diethyl ether, chloroform).
Partition coefficient: n-octanol/water or Coefficient of water/oil distribution : 0.0.98
Auto-ignition temperature : 603°C (1117.4°F)
Decomposition temperature : Not applicable.
Viscosity : Not available.
Particle characteristics : Not applicable.
Volatiles (% by weight) : Not available.
Volatile organic Compounds (VOC's) : N/Av
Absolute pressure of container : N/Av
Flame projection length : N/Av
Other physical/chemical comments : None known or reported by the manufacturer.

SECTION 10. STABILITY AND REACTIVITY

Reactivity : Not normally reactive.
Chemical stability : Stable under the recommended storage and handling conditions prescribed.
Possibility of hazardous reactions : Hazardous polymerization will not occur.
Conditions to avoid : Keep away from excessive heat, open flames, sparks and other possible sources of ignition. Avoid contact with incompatible materials. Do not use in areas without adequate ventilation. Avoid heat, open flames, sparks, static electricity and electrical equipment.
Incompatible materials : Incompatible materials (see Section 7).
Hazardous decomposition products : None known, refer to hazardous combustion products in Section 5.

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SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure:

Routes of entry inhalation : YES

Routes of entry skin & eye : YES

Routes of entry Ingestion : YES

 Routes of exposure skin absorption
 : NO

Potential Health Effects:

Signs and symptoms of short-term (acute) exposure

Sign and symptoms Inhalation

 : May cause irritation of the nose, throat, mucous membranes, and respiratory tract.
 May cause drowsiness or dizziness. Symptoms may include pain, headache, nausea,
 vomiting, dizziness, drowsiness and other central nervous system effects.

Sign and symptoms ingestion

 : May cause irritation of mouth, throat, and stomach. May be an aspiration hazard.
 Aspiration into the lungs during swallowing or subsequent vomiting may cause
 chemical pneumonitis, which can be fatal.

Sign and symptoms skin

: May cause mild skin irritation.

Sign and symptoms eyes

: May cause severe eye irritation.

Potential Chronic Health Effects

 : Prolonged or repeated skin contact may cause drying and irritation. Prolonged
 overexposure may cause liver and kidney effects.

Mutagenicity

: Not expected to be mutagenic in humans.

Carcinogenicity

: No components are listed as carcinogens by ACGIH, IARC, OSHA or NTP.

Reproductive effects & Teratogenicity

: Not expected to have other reproductive effects.

Sensitization to material

: Not expected to be a skin or respiratory sensitizer.

Specific target organ effects

 : Specific target organ toxicity, single exposure - Category 3 (respiratory)
 Specific target organ toxicity, single exposure - Category 3 (narcotic effects)
 May cause respiratory irritation. May cause drowsiness or dizziness.

Not classified as specific target organ toxicity-repeated exposure.

Medical conditions aggravated by overexposure

: Pre-existing skin, eye and respiratory disorders.

Synergistic materials

: None known or reported by the manufacturer.

Toxicological data

: See below for toxicological data on the substance.

<u>Chemical name</u>	<u>LC₅₀(4hr)</u>	<u>LD₅₀</u>	
	<u>inh. rat</u>	<u>(Oral, rat)</u>	<u>(Rabbit, dermal)</u>
Diacetone	7.23g/m ³	4000 mg/kg	13 485 mg/kg

Other important toxicological hazards

: None known or reported by the manufacturer.

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SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity : See the following tables for individual ingredient ecotoxicity data. Do not allow material to contaminate ground water system.

Ecotoxicity data:

<u>Ingredients</u>	CAS #	Toxicity to Fish		
		LC50 / 96h	NOEC / 21 day	M Factor
Diacetone	123-42-2	>100 mg/L (Bluegill sunfish)	N/Av	None.

<u>Ingredients</u>	CAS #	Toxicity to Daphnia		
		EC50 / 48h	NOEC / 21 day	M Factor
Diacetone	123-42-2	> 1000 mg/L (Daphnia magna)	> 100 mg/L	None.

<u>Ingredients</u>	CAS #	Toxicity to Algae		
		EC50 / 96h or 72h	NOEC / 96h or 72h	M Factor
Diacetone	123-42-2	> 1000 mg/L/72hr (Green algae)	N/Av	None.

Persistence and degradability

: Readily biodegradable.

Bioaccumulation potential

: Does not significantly accumulate in organisms.

<u>Components</u>	<u>Partition coefficient n-octanol/water (log Kow)</u>	<u>Bioconcentration factor (BCF)</u>
Diacetone (CAS 123-42-2)	0.098	0.50

Mobility in soil : No data is available on the product itself.

Other Adverse Environmental effects

: No data is available on the product itself.

SECTION 13. DISPOSAL CONSIDERATIONS

Handling for Disposal

: Empty containers retain residue (liquid and/or vapour) and can be dangerous. Do not cut, weld, drill or grind on or near this container.

Methods of Disposal

: Dispose in accordance with all applicable federal, state, provincial and local regulations.

RCRA

: If this product, as supplied, becomes a waste in the United States, it may meet the criteria of a hazardous waste as defined under RCRA, Title 40 CFR 261. It is the responsibility of the waste generator to determine the proper waste identification and disposal method.





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SECTION 14. TRANSPORT INFORMATION

Regulatory Information	UN Number	UN proper shipping name	Transport hazard class(es)	Packing Group	Label
49CFR/DOT	UN1148	DIACETONE ALCOHOL	3	III	
49CFR/DOT Additional information	May be shipped as LIMITED QUANTITY when transported in containers no larger than 1.0 Litre, in packages not exceeding 30 kg gross mass. Refer to 49 CFR Section 173.150. US CERCLA Reportable quantity (RQ): Acetone (5000 lbs / 2270 kg)				
ICAO/IATA	UN1148	Diacetone alcohol	3	III	
ICAO/IATA Additional information	Refer to ICAO/IATA Packing Instruction				
IMDG	UN1148	DIACETONE ALCOHOL	3	III	
IMDG Additional information	May be shipped as a Limited Quantity. Consult the IMDG regulations for details.				
TDG	UN1148	DIACETONE ALCOHOL	3	III	
TDG Additional information	May be shipped as LIMITED QUANTITY when transported in quantities no larger than 1 Litre, in packages not exceeding 30 kg gross mass.				

Special precautions for user : Keep away from heat, sparks and open flame - No smoking.

Environmental hazards : See ECOLOGICAL INFORMATION, Section 12.

SECTION 15 - REGULATORY INFORMATION

US Federal Information:

Components listed below are present on the following U.S. Federal chemical lists:

<u>Ingredients</u>	CAS #	TSCA Inventory	CERCLA Reportable Quantity(RQ) (40 CFR 117.302):	SARA TITLE III: Sec. 302, Extremely Hazardous Substance, 40 CFR 355:	SARA TITLE III: Sec. 313, 40 CFR 372, Specific Toxic Chemical	
					Toxic Chemical	de Minimis Concentration
Diacetone	123-42-2	Yes	N/Ap	N/Av	No	No

SARA TITLE III: Sec. 311 and 312, SDS Requirements, 40 CFR 370 Hazard Classes: Flammable liquid; Eye irritation; Specific target organ toxicity, single exposure

US State Right to Know Laws:

The following chemicals are specifically listed by individual States:



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Ingredients	CAS #	California Proposition 65		State "Right to Know" Lists					
		Listed	Type of Toxicity	CA	MA	MN	NJ	PA	RI
Diacetone	123-42-2	No	N/Ap	Yes	Yes	Yes	Yes	Yes	Yes

Canadian Information:

All ingredients are present on the DSL.

International Information:

Components listed below are present on the following International Inventory list:

Ingredients	CAS #	European EINECS	Australia AICS	Philippines PICCS	Japan ENCS	Korea KECI/KECL	China IECSC	NewZealand IOC
Diacetone	123-42-2	204-626-7	Present	Present	(2)-646; (2)-587	KE-20675	Present	HSR001120

SECTION 16. OTHER INFORMATION

Legend

- : ACGIH: American Conference of Governmental Industrial Hygienists
- CAS: Chemical Abstract Services
- CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act of 1980
- CFR: Code of Federal Regulations
- CNS: Central Nervous System
- CSA: Canadian Standards Association
- DOT: Department of Transportation
- EPA: Environmental Protection Agency
- HMIS: Hazardous Materials Identification System
- HSDB: Hazardous Substances Data Bank
- IARC: International Agency for Research on Cancer
- Inh: Inhalation
- IUCLID: International Uniform Chemical Information Database
- LC: Lethal Concentration
- LD: Lethal Dose
- N/Ap: Not Applicable
- N/Av: Not Available
- NFPA: National Fire Protection Association
- NIOSH: National Institute of Occupational Safety and Health
- NTP: National Toxicology Program
- OSHA: Occupational Safety and Health Administration
- PEL: Permissible exposure limit
- RCRA: Resource Conservation and Recovery Act
- RTECS: Registry of Toxic Effects of Chemical Substances
- SARA: Superfund Amendments and Reauthorization Act
- STEL: Short Term Exposure Limit
- TDG: Canadian Transportation of Dangerous Goods Act & Regulations
- TLV: Threshold Limit Values
- TWA: Time Weighted Average
- WHMIS: Workplace Hazardous Materials Identification System

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References : 1. ACGIH, Threshold Limit Values for Chemical Substances and Physical Agents & Biological Exposure Indices
2. ECHA - European Chemical Agency
3. Canadian Centre for Occupational Health and Safety, CCInfoWeb databases
4. Safety Data Sheets from manufacturer.
5. US EPA Title III List of Lists
6. California Proposition 65 List
7. OECD - The Global Portal to Information on Chemical Substances - eChemPortal

Preparation Date (mm/dd/yyyy) : 12/11/2015

Reviewed Date SDS (dd/mm/yyyy) : 11/12/2015

Revision No. : 2

Revision Information : Updated SDS to comply with new 2023 WHMIS format.

Other special considerations for handling : Provide adequate information, instruction and training for operators.

<p><u>Prepared for:</u> Comet Chemical Company Ltd. 3463 Thomas Street Innisfill, ON L9S 3W4 Information (M-F 8:00-5:00): 705-436-5580 www.cometchemical.com</p>	 <p>COMET CHEMICAL COMPANY LTD.</p>
<p><u>Prepared by:</u> ICC The Compliance Center Inc. Telephone: (888) 442-9628 (U.S.): (888) 977-4834 (Canada) http://www.thecompliancecenter.com</p>	 <p>ComplianceCenter</p>

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