SAFETY DATA SHEET

Preparation Date: 03/24/2016 **Revision Date:** 03/24/2016 **Revision Number:** G1

1. IDENTIFICATION

Product identifier

Product code: DI102
Product Name: DIACETONE ALCOHOL

Other means of identification

Synonyms: 2-Methyl-2-pentanol-4-one
4-Hydroxy-2-keto-4-methylpentane
4-Hydroxy-4-methyl pentan-2-one
4-Hydroxy-4-methyl-2-pentanone
4-Hydroxy-4-methylpentanone-2
Diacetone
Diacetone-alcool (French)
Diketone alcohol
Pyranton
Tyranton
CAS #: 123-42-2
RTECS # SA9100000
CI#: Not available

Recommended use of the chemical and restrictions on use

Recommended use: Solvent. In photographic films and plates. In photographic films. Inks.
Uses advised against No information available

Supplier:
Spectrum Chemical Mfg. Corp
14422 South San Pedro St.
Gardena, CA 90248
(310) 516-8000
Order Online At: https://www.spectrumchemical.com

Emergency telephone number Chemtrec 1-800-424-9300
Contact Person: Martin LaBenz (West Coast)
Contact Person: Ibad Tirmiz (East Coast)

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Considered a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Acute toxicity - Inhalation (Vapors)	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Specific target organ toxicity (single exposure)	Category 3

Flammable liquids	Category 3

Label elements

Warning

Hazard statements
Harmful if inhaled
Causes skin irritation
Causes serious eye irritation
May cause respiratory irritation. May cause drowsiness or dizziness
Flammable liquid and vapor

Hazards not otherwise classified (HNOC)
Not Applicable

Other hazards
May be harmful if swallowed

Precautionary Statements - Prevention
Avoid breathing dust/fume/gas/mist/vapors/spray
Use only outdoors or in a well-ventilated area
Wash face, hands and any exposed skin thoroughly after handling
Wear protective gloves
Wear eye/face protection
Keep away from heat/sparks/open flames/hot surfaces. — No smoking
Ground/bond container and receiving equipment
Use explosion-proof electrical/ventilating/lighting/ .? /equipment
Use only non-sparking tools
Take precautionary measures against static discharge
Do not eat, drink or smoke when using this product

Precautionary Statements - Response
In case of fire: Use CO_2, dry chemical, or foam to extinguish.
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 ON SKIN: Wash with plenty of water
If skin irritation occurs: Get medical advice/attention
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
Wash contaminated clothing before reuse
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 SWALLOWED
Rinse mouth

Precautionary Statements - Storage
Store in a well-ventilated place. Keep container tightly closed
Store locked up

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS-No.	Weight %
Diacetone Alcohol 123-42-2	123-42-2	100

4. FIRST AID MEASURES

First aid measures

General Advice: National Capital Poison Center in the United States can provide assistance if you have a poison emergency and need to talk to a poison specialist. Call 1-800-222-1222

Skin Contact: Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. Get medical attention. If skin irritation persists, call a physician.

Eye Contact: Flush eyes with water for 15 minutes. Get medical attention.

Inhalation: Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.

Ingestion: Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Consult a physician if necessary.

Most important symptoms and effects, both acute and delayed

Symptoms Moderate eye irritation. Moderate skin irritation. Irritating to respiratory system. Nausea. Vomiting. Central nervous system effects. Dizziness. Drowsiness. anesthetic. Fatigue. Narcosis. Headache. May affect respiration. Respiratory depression. It may affect the kidneys. May affect the liver.

Indication of any immediate medical attention and special treatment needed

Notes to Physician: Treat symptomatically

Protection of first-aiders

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste

5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media: Carbon dioxide (CO2). Dry chemical. Alcohol-resistant foam. Water spray.

Unsuitable Extinguishing Media: Do not use a solid (straight) water stream as it may scatter and spread fire.

Specific hazards arising from the chemical

Hazardous Combustion Products: Carbon monoxide; carbon dioxide

Specific hazards:

Flammable
May be ignited by heat, sparks or flames
Vapor may travel considerable distance to source of ignition and flash back
Vapors may form explosive mixtures with air
Most vapors are heavier than air. They will spread along the ground and collect in low or confined areas (sewers, basements, tanks)
Container explosion may occur under fire conditions or when heated
Fire may produce irritating, corrosive and/or toxic gases

Special Protective Actions for Firefighters

Specific Methods:

Water mist may be used to cool closed containers. For larger fires, use water spray or fog. Cool containers with flooding quantities of water until well after fire is out.

Special Protective Equipment for Firefighters:

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

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions:

Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Avoid contact with skin, eyes and clothing. Use personal protective equipment. Remove all sources of ignition. Pay attention to flashback. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use spark-proof tools and explosion-proof equipment. In case of large spill, water spray or vapor suppressing foam may be used to reduce vapors, but may not prevent ignition in closed spaces.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up

Methods for containment

Stop leak if you can do it without risk. Absorb spill with inert material (e.g. vermiculite, dry sand or earth). In case of large spill, dike if needed. Dike far ahead of liquid spill for later disposal.

Methods for cleaning up

Use appropriate tools to put the spilled material in a suitable chemical waste disposal container. Use only non-sparking tools. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling

Technical Measures/Precautions:

Provide sufficient air exchange and/or exhaust in work rooms. Remove all sources of ignition. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Keep away from incompatible materials.

Safe Handling Advice

Wear personal protective equipment. Use only in well-ventilated areas. Avoid contact with skin, eyes and clothing. Keep away from heat and sources of ignition. Do not breathe vapors or spray mist. Do not ingest. When using do not smoke. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Technical Measures/Storage Conditions:
Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Keep away from heat and sources of ignition. Store in a segrated and approved area. Store away from incompatible materials.

Incompatible Materials:
Strong oxidizing agents. Strong bases.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

National occupational exposure limits

U.S Occupational Exposure Limits:

United States

Components	OSHA	NIOSH	ACGIH	AIHA WHEEL
Diacetone Alcohol 123-42-2	50 ppm TWA 240 mg/m^3 TWA	50 ppm TWA 240 mg/m^3 TWA	50 ppm TWA	None

Canada

Canada Occupational Exposure Limits:

Components	Alberta	British Columbia	Ontario	Quebec
Diacetone Alcohol 123-42-2	50 ppm TWA 238 mg/m^3 TWA	50 ppm TWA	50 ppm TWA 240 mg/kg TWA 75 ppm STEL 360 mg/m^3 STEL	50 ppm TWAEV 238 mg/m^3 TWAEV

Australia and Mexico

Occupational Exposure Limits for Australia and Mexico:

Components	Australia	Mexico
Diacetone Alcohol 123-42-2	50 ppm TWA 238 mg/m^3 TWA	50 ppm TWA 240 mg/m^3 TWA 75 ppm STEL 360 mg/m^3 STEL

Appropriate engineering controls

Engineering measures to reduce exposure: Ensure adequate ventilation. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors and mist below their respective threshold limit value.

Individual protection measures, such as personal protective equipment

Personal Protective Equipment

Eye protection: Goggles

Skin and body protection: Chemical resistant apron. Long sleeved clothing. Gloves.

Respiratory protection: Vapor respirator. Be sure to use an approved/certified respirator or equivalent.

Hygiene measures: Avoid contact with skin, eyes and clothing. When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:
Liquid

Appearance:
No information available

Color:
Clear. Colorless.

Odor:
Faint. Pleasant. Minty.

Taste
No information available

Formula:
C6-H12-O2

Molecular/Formula weight:
116.16

Flammability:
Flammable

Flashpoint (°C/°F):
56 °C/132.8 °F
61 °C/141.8 °F

Flash Point Tested according to:
Closed cup
Open cup

Autoignition Temperature (°C/°F):
643 °C/1189.4 °F

Lower Explosion Limit (%):
1.8%

Upper Explosion Limit (%):
6.9%

pH:
No information available

Melting point/range(°C/°F):
-44 °C/-47.2 °F

Decomposition temperature(°C/°F):
No information available

Boiling point/range(°C/°F):
167.9 °C/334.2 °F

Bulk density:
No information available

Density (g/cm3):
No information available

Specific gravity:
0.9306-0.941

Vapor pressure @ 20°C (kPa):
0.129

Evaporation rate:
No information available

Vapor density:
4.0

VOC content (g/L):
No information available

Odor threshold (ppm):
0.27-1.1

Partition coefficient (n-octanol/water):
-0.098

Viscosity:
No information available

Miscibility:
Miscible with water
Miscible with Ether
Miscible with alcohol

Solubility:
No information available

10. STABILITY AND REACTIVITY

Reactivity
Reactive with strong oxidizing agents
Reacts with strong bases

Chemical stability
Stability: Stable under recommended storage conditions

Possibility of Hazardous Reactions: Hazardous polymerization does not occur

Conditions to avoid: Heat. Ignition sources. Incompatible materials.

Incompatible Materials: Strong oxidizing agents. Strong bases.

Hazardous decomposition products: Carbon monoxide. Carbon dioxide.

Other Information
Corrosivity: No information available

Special Remarks on Corrosivity: No information available

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Principal Routes of Exposure:
Ingestion. Skin. Eyes. Inhalation.

Acute Toxicity

The following values are calculated based on chapter 3.1 of the GHS document .
ATEmix (inhalation-dust/mist) 4000mg/l

Component Information

Diacetone Alcohol - 123-42-2
LD50/oral/rat = 4 g/kg Oral LD50 Rat
LD50/oral/mouse = 3950 mg/kg
LD50/dermal/rabbit = 13500 mg/kg
LD50/dermal/rat = No information available
LC50/inhalation/rat = >10 mg/l 4 hr
LC50/inhalation/mouse = No infomation available
Other LD50 or LC50information = No information available

Product Information

LD50/oral/rat =
VALUE- Acute Tox Oral = 4000mg/kg

LD50/oral/mouse =
Value - Acute Tox Oral = 3950mg/kg

LD50/dermal/rabbit
VALUE-Acute Tox Dermal = 13500mg/kg

LD50/dermal/rat
VALUE -Acute Tox Dermal = No information available

LC50/inhalation/rat
VALUE-Vapor = >10mg/l (4-hr)
VALUE-Gas = No information available
VALUE-Dust/Mist = No information available

LC50/Inhalation/mouse
VALUE-Vapor = No information available
VALUE - Gas = No information available
VALUE - Dust/Mist = No information available

Symptoms

Skin Contact:	Causes skin irritation. Can cause redness and pain.
Eye Contact:	Causes eye irritation. Moderately irritating to the eyes.
Inhalation	Irritating to respiratory system. May cause conjunctival irritation. May affect respiration (respiratory depression). May cause central nervous system depression. Inhalation of vapors may cause drowsiness and dizziness. May affect behavior/central nervous system (narcosis). May affect behavior/central nervous system (excitement). May cause headache, nausea, vomiting. Symptoms may include coughing and sneezing.

Ingestion May be harmful if swallowed. May affect respiration (respiratory depression). May affect behavior/central nervous system (somnolence). May affect behavior/central nervous system (tremors). May affect behavior/central nervous system (convulsions, seizures). May affect behavior/central nervous system (general anesthetic).

Aspiration hazard No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chronic Toxicity Prolonged or repeated skin contact may cause dermatitis and defatting, dryness, and cracking of the skin
Chronic exposure may affect the liver and kidneys

Sensitization: No information available

Mutagenic Effects: No information available

Carcinogenic effects: Not classifiable as a human carcinogen.

Components	IARC	ACGIH - Carcinogens	NTP	OSHA HCS - Carcinogens	Australia - Notifiable Carcinogenic Substances	Australia - Prohibited Carcinogenic Substances
Diacetone Alcohol	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed

Reproductive toxicity No data is available

Reproductive Effects: No information available
Developmental Effects: No information available
Teratogenic Effects: No information available

Specific Target Organ Toxicity

STOT - single exposure Respiratory system. central nervous system.
STOT - repeated exposure No information available
Target Organs: Kidneys. Liver. Skin. Nervous system.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity effects: Aquatic environment.

Diacetone Alcohol - 123-42-2
Freshwater Fish Species Data: 420 mg/L LC50 Lepomis macrochirus 96 h 1
420 mg/L LC50 Lepomis macrochirus 96 h static 1
Water Flea Data: 8750 mg/L EC50 Daphnia magna 24 h

Persistence and degradability: No information available

Bioaccumulative potential: No information available

Mobility: No information available

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Waste from residues / unused products:
Waste must be disposed of in accordance with Federal, State and Local regulation.

Contaminated packaging:
Empty containers should be taken for local recycling, recovery or waste disposal

Components	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
Diacetone Alcohol	None	None	None	None

14. TRANSPORT INFORMATION

DOT

UN-No:	UN1148
Proper Shipping Name:	Diacetone alcohol
Hazard Class:	3
Subsidiary Risk:	No information available
Packing Group:	III
ERG No:	129
Marine Pollutant	No data available
DOT RQ (lbs):	No information available
Special Provisions	No Information available
Symbol(s):	No information available

TDG (Canada)

UN-No:	UN1148
Proper Shipping Name:	Diacetone alcohol
Hazard Class:	3
Subsidiary Risk:	No information available
Packing Group:	III
Marine Pollutant	No Information available

ADR

UN-No:	UN1148
Proper Shipping Name:	Diacetone alcohol
Hazard Class:	3
Packing Group:	III
Subsidiary Risk:	No information available

IMO / IMDG

UN-No:	UN1148
Proper Shipping Name:	Diacetone alcohol
Hazard Class:	3
Subsidiary Risk:	No information available
Packing Group:	III
Marine Pollutant	No information available
EMS:	F-E

RID

UN-No:	UN1148
Proper Shipping Name:	Diacetone alcohol
Hazard Class:	3

14. TRANSPORT INFORMATION

Subsidiary Risk: 3
Packing Group: III

ICAO

UN-No: UN1148
Proper Shipping Name: Diacetone alcohol
Hazard Class: 3
Subsidiary Risk: No information available
Packing Group: III

IATA

UN-No: UN1148
Proper Shipping Name: Diacetone alcohol
Hazard Class: 3
Subsidiary Risk: No information available
Packing Group: III
ERG Code: 3L
Special Provisions No information available

15. REGULATORY INFORMATION

International Inventories

Components	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	CHINA	Australia (AICS)	EINECS-No.
Diacetone Alcohol	Present	Present KE-20675	Present	Present (2)-646 (2)-587	Present	Present	Present 204-626-7

U.S. Regulations

Diacetone Alcohol

Massachusetts RTK: Present
New Jersey RTK Hazardous Substance List: 0606
Pennsylvania RTK: Present
Minnesota - Hazardous Substance List: Present
California Directors List of Hazardous Substances: Present

California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.

Chemicals Known to the State of California to Cause Cancer:
WARNING: This product contains a chemical known to the State of California to cause cancer. (See table below)

Chemicals Known to the State of California to Cause Reproductive Toxicity:
WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm (See table below)

Components	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
Diacetone Alcohol	Not Listed	Not Listed	Not Listed	Not Listed

CERCLA/SARA

Components	CERCLA - Hazardous Substances and their Reportable Quantities	Section 302 Extremely Hazardous Substances and TPQs	Section 302 Extremely Hazardous Substances and RQs	Section 313 - Chemical Category	Section 313 - Reporting *de minimis*
Diacetone Alcohol	None	None	None	None	None

U.S. TSCA

Components	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
Diacetone Alcohol	Not Applicable	08/04/199506/30/1998

Canada

WHMIS hazard class:
B3 Combustible liquid
D2B Toxic materials

Diacetone Alcohol
B3 D2B

Canada Controlled Products Regulation:
This product has been classified according to the hazard criteria of the CPR (Controlled Products Regulation) and the MSDS contains all of the information required by the CPR.

Components	WHMIS Ingredient Disclosure List -
Diacetone Alcohol	1 %

Inventory

Components	Canada (DSL)	Canada (NDSL)
Diacetone Alcohol	Present	Not Listed

Components	CEPA Schedule I - Toxic Substances
Diacetone Alcohol	Not listed

Components	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
Diacetone Alcohol	Not listed

EU Classification

R-phrase(s)
R36 - Irritating to eyes.

S -phrase(s)
S 9 - Keep container in a well-ventilated place.
S16 - Keep away from sources of ignition - No smoking.
S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S24/25 - Avoid contact with skin and eyes.

Components	Classification	Concentration Limits:	Safety Phrases
Diacetone Alcohol	Xi; R36	10%<=C: Xi; R36	S2 S24/25

The product is classified in accordance with Annex VI to Directive 67/548/EEC

Indication of danger:
Xi - Irritant.

16. OTHER INFORMATION

Preparation Date: 03/24/2016
Revision Date: 03/24/2016
Prepared by: Sonia Owen

Disclaimer:

All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

End of Safety Data Sheet