



Diacetone Alcohol

Material Safety Data Sheet

Arkema Inc.

1 PRODUCT AND COMPANY IDENTIFICATION

Thio and Fine Chemicals

Arkema Inc.
2000 Market Street
Philadelphia, PA 19103

EMERGENCY PHONE NUMBERS:

Chemtrec: (800) 424-9300 (24hrs) or (703) 527-3887
Medical: Rocky Mountain Poison Control Center
(866) 767-5089 (24Hrs)

Information Telephone Numbers	Phone Number	Available Hrs
Customer Service	1-800-628-4453	8:30 to 5:30 EST

Product Name Diacetone Alcohol
Product Synonym(s)
Chemical Family Alcohol
Chemical Formula C₆H₁₂O₂
Chemical Name 4-Hydroxy-4-Methyl-2-Pentanone
EPA Reg Num
Product Use Paint and Varnish Industry; Solvents; Organic Synthesis

2 COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient Name	CAS RegistryNumber	Typical %	OSHA
Diacetone alcohol	123-42-2	> 99.7% By Wt.	Y

The substance(s) marked with a "Y" in the OSHA column, are identified as hazardous chemicals according to the criteria of the OSHA Hazard Communication Standard (29 CFR 1910.1200)

This material is classified as hazardous under Federal OSHA regulation.

The components of this product are all on the TSCA Inventory list.

3 HAZARDS IDENTIFICATION

Emergency Overview

Colorless liquid with characteristic odor.

WARNING!

COMBUSTIBLE LIQUID AND VAPOR.

MAY CAUSE EYE AND SKIN IRRITATION.

MAY CAUSE CENTRAL NERVOUS SYSTEM EFFECTS

Potential Health Effects

Inhalation and skin contact are expected to be the primary routes of occupational exposure to this material. Based on single exposure animal tests, it is considered to be slightly toxic if swallowed, practically non-toxic if absorbed through skin or inhaled and moderately irritating to eyes and skin. Prolonged or repeated contact may remove oils from the skin and may dry skin and cause irritation, redness and rash. High vapor concentrations may be irritating to the eyes and respiratory tract, and may result in central nervous system (CNS) effects such as headache, dizziness, nausea, drowsiness and, in severe exposures, loss of consciousness.

4 FIRST AID MEASURES

4 FIRST AID MEASURES

IF IN EYES, immediately flush with plenty of water for at least 15 minutes. Get medical attention.

IF ON SKIN, immediately wash with soap and plenty of water. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.

IF SWALLOWED, induce vomiting immediately as directed by medical personnel. Get medical attention. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

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

5 FIRE FIGHTING MEASURES**Fire and Explosive Properties**

Auto-Ignition Temperature	640 C	
Flash Point	62 C	Flash Point Method
Flammable Limits- Upper	6.9	
Lower	1.8	

Extinguishing Media

Use water spray, carbon dioxide, foam.

Fire Fighting Instructions

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.

Fire and Explosion Hazards

When burned, the following hazardous products of combustion can occur: Carbon monoxide, Carbon dioxide.

6 ACCIDENTAL RELEASE MEASURES**In Case of Spill or Leak**

Extinguish or turn off all ignition sources. Contain spill with inert materials. Collect with non-sparking tools to a suitable container. Flush with water. Wear appropriate personal protective equipment as indicated in section 8 of this MSDS. 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.

7 HANDLING AND STORAGE**Handling**

Keep away from heat, sparks and flame. Keep container closed. Use only with adequate ventilation. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling.

Storage

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 rated, grounded and installed to satisfy electrical classification requirements. Static electricity may accumulate and create a fire hazard. All storage containers, including containers such as drums, cylinders and IBC's, must be bonded and grounded during filling and emptying operations. Store away from oxidizers and reactive materials. Keep container tightly



7 HANDLING AND STORAGE

closed. 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.

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls

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

Eye / Face Protection

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

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 contaminated skin promptly. Wash contaminated clothing and clean protective equipment before reuse. Wash skin thoroughly after handling.

Respiratory Protection

Avoid breathing vapor or mist. When airborne exposure limits are exceeded (see below), use NIOSH approved respiratory protection equipment appropriate to the material and/or its components. Consult respirator manufacturer to determine appropriate type equipment for given application. Observe respirator use limitations specified by NIOSH or the manufacturer. For emergency and other conditions 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.

Airborne Exposure Guidelines for Ingredients

Exposure Limit		Value
Diacetone alcohol		
ACGIH TWA	-	50 ppm 238 mg/m3
OSHA TWA PEL	-	50 ppm 240 mg/m3

- Only those components with exposure limits are printed in this section.
- Skin contact limits designated with a "Y" above have skin contact effect. Air sampling alone is insufficient to accurately quantitate exposure. Measures to prevent significant cutaneous absorption may be required.
- ACGIH Sensitizer designator with a value of "Y" above means that exposure to this material may cause allergic reactions.
- WEEL-AIHA Sensitizer designator with a value of "Y" above means that exposure to this material may cause allergic skin reactions.

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance/Odor	Colorless liquid with characteristic odor.
pH	NE
Specific Gravity	0.94 @ 20 deg C
Vapor Pressure	1.12hPa (mbar) 20 C
Vapor Density	5.17 kg/m ³ (20 C)
Melting Point	-54 C
Freezing Point	-47 F (-44 C)
Boiling Point	334 F (168 C)
Solubility In Water	Completely miscible
Evaporation Rate	147 (ether = 1)
Other Physical Data	log Pow = 1.03 Coefficient of volumetric expansion at 20 C: 0.001 per C Surface tension (20C): 30 mN/m (approximately) Conductivity: 7x10 EXP(7) pS/m Henry's constant: 4.29x10 EXP(-4) Pa.m ³ /mol

10 STABILITY AND REACTIVITY**Stability**

This material is chemically stable under normal and anticipated storage and handling conditions. However, avoid flames, welding arcs, potential ignition sources, or other high temperature sources which induce thermal decomposition.

Incompatibility

Contact with strong acids and strong bases may result in a high energy release.

Hazardous Decomposition Products

Oxides of carbon, including toxic carbon monoxide gas can be liberated at temperatures above ambient.

11 TOXICOLOGICAL INFORMATION**Toxicological Information**

Data on this material and/or its components are summarized below.

Diacetone Alcohol

Single exposure (acute) studies indicate that this material is slightly toxic if swallowed (rat LD50 4,000 mg/kg), practically non-toxic if absorbed through skin (rabbit LD50 13,630 mg/kg) or inhaled (rat 8-hr LC50 >1,500 ppm) and moderately irritating to rabbit eyes and skin. No skin allergy was observed in guinea pigs following repeated exposure. Single oral doses produced kidney toxicity (due to red blood cell breakdown) and liver damage in rats. Possible kidney effects were reported in rats following repeated administration in drinking water. Following repeated inhalation exposure, rats exhibited signs of possible liver and kidney effects; cellular damage was not observed. There were no statistically significant changes in reproductive parameters in rats after oral exposure. No genetic changes were observed in tests using bacteria or yeast cells. A marginal positive response was reported in a test using animal cells.

12 ECOLOGICAL INFORMATION**Ecotoxicological Information**

Data on this material and/or its components are summarized below.

12 ECOLOGICAL INFORMATION

Diacetone Alcohol

This material is practically non-toxic to *Daphnia magna* (48-hr EC50 > 1000 mg/l), freshwater fish (96-hr LC50 > 100 mg/l, goldfish (24-hr LC50 >5,000 mg/l), golden orfe (48-hr LC50 10,575 mg/l), bluegill sunfish (96-hr LC50 420 mg/l), algae (72-hr EC50 >1000 mg/l), and tidewater silversides (96-hr LC50 420 mg/l).

Chemical Fate Information

Data on this material and/or its components are summarized below.

Diacetone Alcohol

This material is readily biodegradable (100% after 14-days). The half-life in air is 12 days. It has slight adsorption in soils and sediments (log Koc = 1.3). The log Pow is -0.14

13 DISPOSAL CONSIDERATIONS

Waste Disposal

Incineration is the recommended method for disposal observing all local, state and federal regulations. 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

DOT Name	Non-Bulk Domestic Drums: Not regulated by DOT
DOT Technical Name	
DOT Hazard Class	
UN Number	
DOT Packing Group	PG
RQ	
DOT Special Information	Bulk Packages/International Shipments: Diacetone Alcohol, 3 Flammable Liquid, UN 1148, PG III

15 REGULATORY INFORMATION

Hazard Categories Under Criteria of SARA Title III Rules (40 CFR Part 370)

Immediate (Acute) Health	Y	Fire	Y
Delayed (Chronic) Health	N	Reactive	N
		Sudden Release of Pressure	N

The components of this product are all on the TSCA Inventory list.

Ingredient Related Regulatory Information:

SARA Reportable Quantities

Diacetone alcohol

CERCLA RQ

NE

SARA TPQ

Massachusetts Right to Know

This product does contain the following chemicals(s), as indicated below, currently on the Massachusetts Right to Know Substance List.

Diacetone alcohol



New Jersey Right to Know

This product does contain the following chemical(s), as indicated below, currently on the New Jersey Right-to-Know Substances List.
Diacetone alcohol

Pennsylvania Right to Know

This product does contain the following chemical(s), as indicated below, currently on the Pennsylvania Hazardous Substance List.
Diacetone alcohol

16 OTHER INFORMATION

Revision Information

Revision Date 09 APR 2007 Revision Number 2
Supercedes Revision Dated 07-FEB-2005

Revision Summary

HEIS update.

Key

NE= Not Established NA= Not Applicable (R) = Registered Trademark

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