



# Material Safety Data Sheet

<p><b>NFPA</b></p> 	<p><b>HMIS</b></p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr><td style="background-color: #00FFFF;">Health Hazard</td><td style="text-align: center; border: 1px solid black;">3</td></tr> <tr><td style="background-color: #FFC0CB;">Fire Hazard</td><td style="text-align: center; border: 1px solid black;">1</td></tr> <tr><td style="background-color: #FFFF00;">Reactivity</td><td style="text-align: center; border: 1px solid black;">0</td></tr> </table>	Health Hazard	3	Fire Hazard	1	Reactivity	0	<p><b>Personal Protective Equipment</b></p>  <p style="text-align: center;">See Section 15.</p>
Health Hazard	3							
Fire Hazard	1							
Reactivity	0							

Section 1. Chemical Product and Company Identification		Page Number: 1
<b>Common Name/Trade Name</b>	<b>1,3-Dichloroacetone</b>	
	<b>Catalog Number(s)</b>	D2076
	<b>CAS#</b>	534-07-6
<b>Manufacturer</b>	SPECTRUM LABORATORY PRODUCTS INC. 14422 S. SAN PEDRO STREET GARDENA, CA 90248	
	<b>RTECS</b>	UC1430000
	<b>TSCA</b>	TSCA 8(b) inventory: 1,3-Dichloroacetone
<b>Commercial Name(s)</b>	Not available.	
	<b>CI#</b>	Not available.
<b>Synonym</b>	1,3-Dichloro-2-propanone; alpha,alpha'-Dichloroacetone; alpha,gamma-Dichloroacetone; Bis(chloromethyl)ketone; sym-Dichloroacetone	
<b>Chemical Name</b>	2-Propanone, 1,3-dichloro-	
<b>Chemical Family</b>	Not available.	
<b>Chemical Formula</b>	C3-H4-Cl2-O	
<b>Supplier</b>	SPECTRUM LABORATORY PRODUCTS INC. 14422 S. SAN PEDRO STREET GARDENA, CA 90248	
	<p><b><u>IN CASE OF EMERGENCY</u></b>  <b><u>CHEMTREC (24hr) 800-424-9300</u></b></p> <p>CALL (310) 516-8000</p>	

Section 2. Composition and Information on Ingredients					
Name	CAS #	Exposure Limits			% by Weight
		TWA (mg/m <sup>3</sup> )	STEL (mg/m <sup>3</sup> )	CEIL (mg/m <sup>3</sup> )	
1) {1,3-}Dichloroacetone	534-07-6				100
<b>Toxicological Data on Ingredients</b>	<p><b>1,3-Dichloroacetone:</b>  ORAL (LD50): Acute: 20 mg/kg [Rat]. 18.9 mg/kg [Mouse].  DERMAL (LD50): Acute: 53 mg/kg [Rabbit].  VAPOR (LC50): Acute: 29 mg/m<sup>3</sup> 2 hours [Rat]. 27 mg/m<sup>3</sup> 2 hours [Mouse].</p>				

Section 3. Hazards Identification	
<b>Potential Acute Health Effects</b>	Very hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation. Severe over-exposure can result in death. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

**Potential Chronic Health Effects**

**CARCINOGENIC EFFECTS:** Not available.  
**MUTAGENIC EFFECTS:** Mutagenic for bacteria and/or yeast.  
**TERATOGENIC EFFECTS:** Not available.  
**DEVELOPMENTAL TOXICITY:** Not available.  
 The substance may be toxic to kidneys, liver.  
 Repeated or prolonged exposure to the substance can produce target organs damage. Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

**Section 4. First Aid Measures****Eye Contact**

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately.

**Skin Contact**

In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

**Serious Skin Contact**

Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

**Inhalation**

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

**Serious Inhalation**

Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. **WARNING:** It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek immediate medical attention.

**Ingestion**

If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

**Serious Ingestion**

Not available.

**Section 5. Fire and Explosion Data**

**Flammability of the Product** May be combustible at high temperature.

**Auto-Ignition Temperature** Not available.

**Flash Points** Not available.

**Flammable Limits** Not available.

**Products of Combustion** These products are carbon oxides (CO, CO<sub>2</sub>), halogenated compounds.

**Fire Hazards in Presence of Various Substances** Slightly flammable to flammable in presence of open flames and sparks, of heat.

**Explosion Hazards in Presence of Various Substances** Risks of explosion of the product in presence of mechanical impact: Not available.  
 Risks of explosion of the product in presence of static discharge: Not available.

**Fire Fighting Media and Instructions** SMALL FIRE: Use DRY chemical powder.  
 LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

**Special Remarks on Fire Hazards** Not available.

**Special Remarks on Explosion Hazards** Not available.

**Section 6. Accidental Release Measures**

<b>Small Spill</b>	Use appropriate tools to put the spilled solid in a convenient waste disposal container.
<b>Large Spill</b>	Poisonous solid. Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all ignition sources. Call for assistance on disposal.

**Section 7. Handling and Storage**

<b>Precautions</b>	Keep locked up.. Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe dust. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes.
<b>Storage</b>	Keep container tightly closed. Keep container in a cool, well-ventilated area.

**Section 8. Exposure Controls/Personal Protection**

<b>Engineering Controls</b>	Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.
<b>Personal Protection</b>	Splash goggles. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.
<b>Personal Protection in Case of a Large Spill</b>	Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.
<b>Exposure Limits</b>	Not available.

**Section 9. Physical and Chemical Properties**

<b>Physical state and appearance</b>	Solid. (Crystals solid.)	<b>Odor</b>	Not available.
<b>Molecular Weight</b>	126.97 g/mole	<b>Taste</b>	Not available.
<b>pH (1% soln/water)</b>	Not available.	<b>Color</b>	White to yellowish.
<b>Boiling Point</b>	172°C (341.6°F) - 173 C.		
<b>Melting Point</b>	45°C (113°F)		
<b>Critical Temperature</b>	Not available.		
<b>Specific Gravity</b>	1.383 (Water = 1)		
<b>Vapor Pressure</b>	Not applicable.		
<b>Vapor Density</b>	4.38 (Air = 1)		
<b>Volatility</b>	Not available.		
<b>Odor Threshold</b>	Not available.		
<b>Water/Oil Dist. Coeff.</b>	Not available.		
<b>Ionicity (in Water)</b>	Not available.		
<b>Dispersion Properties</b>	See solubility in water, diethyl ether.		
<b>Solubility</b>	Soluble in cold water, diethyl ether. Solubility in Water: >10% Solubility in Ethanol: >10% Solubility in Ether: >10%		

**Section 10. Stability and Reactivity Data**

<b>Stability</b>	The product is stable.
<b>Instability Temperature</b>	Not available.
<b>Conditions of Instability</b>	Excess heat, ignition sources, dust generation
<b>Incompatibility with various substances</b>	Not available.
<b>Corrosivity</b>	Not available.
<b>Special Remarks on Reactivity</b>	Not available.
<b>Special Remarks on Corrosivity</b>	Not available.
<b>Polymerization</b>	Will not occur.

**Section 11. Toxicological Information**

<b>Routes of Entry</b>	Absorbed through skin. Inhalation. Ingestion.
<b>Toxicity to Animals</b>	<b>WARNING: THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE BASIS OF A 4-HOUR EXPOSURE.</b> Acute oral toxicity (LD50): 18.9 mg/kg [Mouse]. Acute dermal toxicity (LD50): 53 mg/kg [Rabbit]. Acute toxicity of the vapor (LC50): 27 mg/m <sup>3</sup> 2 hours [Mouse].
<b>Chronic Effects on Humans</b>	<b>MUTAGENIC EFFECTS:</b> Mutagenic for bacteria and/or yeast. May cause damage to the following organs: kidneys, liver.
<b>Other Toxic Effects on Humans</b>	Very hazardous in case of skin contact (irritant), of ingestion, of inhalation.
<b>Special Remarks on Toxicity to Animals</b>	Not available.
<b>Special Remarks on Chronic Effects on Humans</b>	May affect genetic material (mutagenic)
<b>Special Remarks on other Toxic Effects on Humans</b>	Acute Potential Health Effects: Skin: Causes severe skin irritation. and numbness and tingling. It can be absorbed through the skin in harmful amounts. May be fatal if absorbed through the skin. It can cause system effects similar to that of ingestion if absorbed through skin. Eyes: Causes severe eye irritation. Lacrimator. May cause corneal damage and numbness and tingling. Inhalation: May be fatal if inhaled. May cause vomiting, nausea. May affect respiration (pulmonary edema), brain (increased intracranial pressure), behavior/central nervous system (CNS depression, dizziness, weakness, loss of coordination and judgement, fainting, tremor, coma, possibly death), kidneys, liver Ingestion: Toxic. May be fatal if swallowed. May cause nausea, vomiting, May affect behavior/central nervous system (CNS depression, somnolence, etc.), eyes (iritis), blood (changes in serum composition), kidneys, liver. Chronic Potential Health Effects: Skin: Repeated or prolonged skin contact may cause dermatitis.

**Section 12. Ecological Information**

<b>Ecotoxicity</b>	Not available.
<b>BOD5 and COD</b>	Not available.
<b>Products of Biodegradation</b>	Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.
<b>Toxicity of the Products of Biodegradation</b>	The products of degradation are as toxic as the product itself.

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**Special Remarks on the Products of Biodegradation** Not available.

**Section 13. Disposal Considerations**

**Waste Disposal** Waste must be disposed of in accordance with federal, state and local environmental control regulations.

**Section 14. Transport Information**

**DOT Classification** CLASS 6.1: Poisonous material.

**Identification** UNNA: 2649 : 1,3-Dichloroacetone PG: II

**Special Provisions for Transport** Not available.

**DOT (Pictograms)**



**Section 15. Other Regulatory Information and Pictograms**

**Federal and State Regulations** Illinois chemical safety act: 1,3-Dichloroacetone  
 New York release reporting list: 1,3-Dichloroacetone  
 Pennsylvania RTK: 1,3-Dichloroacetone  
 Massachusetts RTK: 1,3-Dichloroacetone  
 Massachusetts spill list: 1,3-Dichloroacetone  
 New Jersey: 1,3-Dichloroacetone  
 New Jersey spill list: 1,3-Dichloroacetone  
 Louisiana RTK reporting list: 1,3-Dichloroacetone  
 TSCA 8(b) inventory: 1,3-Dichloroacetone  
 TSCA 8(d) H and S data reporting: 1,3-Dichloroacetone: Effective date: 6/1/87; Sunset date: 12/19/95  
 SARA 302/304/311/312 extremely hazardous substances: 1,3-Dichloroacetone  
 CERCLA: Hazardous substances.: 1,3-Dichloroacetone: 10 lbs. (4.536 kg)

**California Proposition 65 Warnings** California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: No products were found.  
 California prop. 65: This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: No products were found.

**Other Regulations** OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).  
 EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances (EINECS No. 208-585-6).  
 Canada: Listed on Canadian Domestic Substance List (DSL).  
 China: Listed on National Inventory.  
 Japan: Listed on National Inventory (ENCS).  
 Korea: Listed on National Inventory (KECI).  
 Philippines: Listed on National Inventory (PICCS).  
 Australia: Listed on AICS.

**Other Classifications** **WHMIS (Canada)** CLASS D-1A: Material causing immediate and serious toxic effects (VERY TOXIC).  
 CLASS D-2B: Material causing other toxic effects (TOXIC).

**DSCL (EEC)**

R24- Toxic in contact with skin.	S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
R26/28- Very toxic by inhalation and if swallowed.	S28- After contact with skin, wash immediately with plenty of water.
R38- Irritating to skin.	S36/37/39- Wear suitable protective clothing, gloves and eye/face protection.
R41- Risk of serious damage to eyes.	S45- In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

HMIS (U.S.A.)

Health Hazard	3
Fire Hazard	1
Reactivity	0
Personal Protection	E

National Fire Protection Association (U.S.A.)

Health



Flammability

Reactivity

Specific hazard

WHMIS (Canada)  
(Pictograms)



DSCL (Europe)  
(Pictograms)



TDG (Canada)  
(Pictograms)



ADR (Europe)  
(Pictograms)



Protective Equipment



Gloves.



Lab coat.



Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.



Splash goggles.

Section 16. Other Information

MSDS Code 4440D

References Not available.

Other Special Considerations Major Uses: vesicant; synthesis of citric acid based on the reaction of glycerol derived 1,3-dichloroacetone with cyanide.

Validated by Sonia Owen on 7/2/2009.

Verified by Sonia Owen.  
Printed 7/2/2009.

**CALL (310) 516-8000****Notice to Reader**

*All chemicals may pose unknown hazards and should be used with caution. This Material Safety Data Sheet (MSDS) 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 MSDS. 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 MSDS is based on technical data judged to be reliable, Spectrum Quality Products, Inc. assumes no responsibility for the completeness or accuracy of the information contained herein.*