





# Material Safety Data Sheet

NFPA	HMIS	Personal Protective Equipment						
	<table><tr><td>Health Hazard</td><td>2</td></tr><tr><td>Fire Hazard</td><td>1</td></tr><tr><td>Reactivity</td><td>0</td></tr></table>	Health Hazard	2	Fire Hazard	1	Reactivity	0	<div></div> <div>See Section 15.</div>
Health Hazard	2							
Fire Hazard	1							
Reactivity	0							

Section 1. Chemical Product and Company Identification			Page Number: 1
Common Name/ Trade Name	Chlorogenic Acid	Catalog Number(s).	C2302
Manufacturer	SPECTRUM LABORATORY PRODUCTS INC. 14422 S. SAN PEDRO STREET GARDENA, CA 90248	CAS#	327-97-9
		RTECS	GU8480000
		TSCA	TSCA 8(b) inventory: No products were found.
Commercial Name(s)	Not available.	CI#	Not available.
Synonym	3-Caffeoylquinic acid; 3-O-Caffeoylquinic acid; 3-O-(3,4-Dihydroxycinnamoyl)-D-quinic Acid	<b>IN CASE OF EMERGENCY</b> <a href="tel:8004249300">CHEMTREC (24hr) 800-424-9300</a>  CALL (310) 516-8000	
Chemical Name	Cyclohexanecarboxylic acid,3-((3-(3-4-dihydroxyphenyl)-1-oxo-2-propenyl)oxy)-1,4,5-trihydroxy		
Chemical Family	Not available.		
Chemical Formula	C16-H18-O9		
Supplier	SPECTRUM LABORATORY PRODUCTS INC. 14422 S. SAN PEDRO STREET GARDENA, CA 90248		

Section 2. Composition and Information on Ingredients					
		Exposure Limits			
Name	CAS #	TWA (mg/m <sup>3</sup> )	STEL (mg/m <sup>3</sup> )	CEIL (mg/m <sup>3</sup> )	% by Weight
1) Chlorogenic Acid	327-97-9				100
Toxicological Data on Ingredients	Chlorogenic Acid LD50: Not available. LC50: Not available.				

Section 3. Hazards Identification	
Potential Acute Health Effects	Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation.
Potential Chronic Health Effects	<b>CARCINOGENIC EFFECTS:</b> Not available. <b>MUTAGENIC EFFECTS:</b> Mutagenic for bacteria and/or yeast. <b>TERATOGENIC EFFECTS:</b> Not available. <b>DEVELOPMENTAL TOXICITY:</b> Not available. Repeated or prolonged exposure is not known to aggravate medical condition.

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**Section 4. First Aid Measures**

<b>Eye Contact</b>	Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. WARM water MUST be used. Get medical attention.
<b>Skin Contact</b>	In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.
<b>Serious Skin Contact</b>	Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.
<b>Inhalation</b>	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
<b>Serious Inhalation</b>	Not available.
<b>Ingestion</b>	Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.
<b>Serious Ingestion</b>	Not available.

**Section 5. Fire and Explosion Data**

<b>Flammability of the Product</b>	May be combustible at high temperature.
<b>Auto-Ignition Temperature</b>	Not available.
<b>Flash Points</b>	Not available.
<b>Flammable Limits</b>	Not available.
<b>Products of Combustion</b>	These products are carbon oxides (CO, CO <sub>2</sub> ).
<b>Fire Hazards in Presence of Various Substances</b>	Slightly flammable to flammable in presence of heat. Non-flammable in presence of shocks.
<b>Explosion Hazards in Presence of Various Substances</b>	Slightly explosive in presence of open flames and sparks. Non-explosive in presence of shocks.
<b>Fire Fighting Media and Instructions</b>	SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.
<b>Special Remarks on Fire Hazards</b>	As with most organic solids, fire is possible at elevated temperatures
<b>Special Remarks on Explosion Hazards</b>	Fine dust dispersed in air in sufficient concentrations, and in the presences of an ignition source is a potential dust explosion hazard.

**Section 6. Accidental Release Measures**

<b>Small Spill</b>	Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.
<b>Large Spill</b>	Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

**Section 7. Handling and Storage**

<b>Precautions</b>	Keep away from heat. Keep away from sources of ignition. Do not breathe dust. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If you feel unwell, seek medical attention and show the label when possible. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents.
<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. (Powdered solid. Crystals solid.)	<b>Odor</b>	Odorless.
<b>Molecular Weight</b>	354.31 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>	Not available.		
<b>Melting Point</b>	207°C (404.6°F) - 209 C		
<b>Critical Temperature</b>	Not available.		
<b>Specific Gravity</b>	Not available.		
<b>Vapor Pressure</b>	Not applicable.		
<b>Vapor Density</b>	Not available.		
<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.		
<b>Solubility</b>	Soluble in hot water.		

**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, dust generation, incompatible materials
<b>Incompatibility with various substances</b>	Reactive with oxidizing agents.
<b>Corrosivity</b>	Not available.

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**Special Remarks on Reactivity** Not available.

**Special Remarks on Corrosivity** Not available.

**Polymerization** Will not occur.

### **Section 11. Toxicological Information**

**Routes of Entry** Inhalation. Ingestion.

**Toxicity to Animals** LD50: Not available.  
LC50: Not available.

**Chronic Effects on Humans** **MUTAGENIC EFFECTS:** Mutagenic for bacteria and/or yeast.

**Other Toxic Effects on Humans** Hazardous in case of skin contact (irritant), of ingestion, of inhalation.

**Special Remarks on Toxicity to Animals** Not available.

**Special Remarks on Chronic Effects on Humans** May affect genetic material (mutagenic).  
May cause birth defects (teratogenic) based on animal test data

**Special Remarks on other Toxic Effects on Humans** Acute Potential Health Effects:  
Skin: May cause skin irritation.  
Eyes: May cause eye irritation.  
Inhalation: May cause respiratory tract irritation.  
Ingestion: May cause digestive tract irritation.  
The toxicological properties of this substance have not been fully investigated.

### **Section 12. Ecological Information**

**Ecotoxicity** Not available.

**BOD5 and COD** Not available.

**Products of Biodegradation** Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

**Toxicity of the Products of Biodegradation** The product itself and its products of degradation are not toxic.

**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** Not a DOT controlled material (United States).

**Identification** Not applicable.

**Special Provisions for Transport** Not applicable.

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## DOT (Pictograms)



## Section 15. Other Regulatory Information and Pictograms

## Federal and State Regulations

No products were found.

## California Proposition 65 Warnings

## Other Regulations

EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

## Other Classifications

## WHMIS (Canada)

Not controlled under WHMIS (Canada).

## DSCL (EEC)

Not available

S24/25- Avoid contact with skin and eyes.  
 S28- After contact with skin, wash immediately with plenty of water  
 S37/39- Wear suitable gloves and eye/face protection.  
 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	2
Fire Hazard	1
Reactivity	0
Personal Protection	E

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

Health	1	0	Flammability
			Reactivity
			Specific hazard

## WHMIS (Canada) (Pictograms)



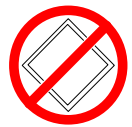
## DSCL (Europe) (Pictograms)



## TDG (Canada) (Pictograms)



## ADR (Europe) (Pictograms)



## Protective Equipment



Gloves.



Lab coat.



Dust respirator. Be sure to use an approved/certified respirator or equivalent.



Splash goggles.

**Section 16. Other Information****MSDS Code** 5045C**References** Not available.**Other Special Considerations** Not available.

Validated by Sonia Owen on 8/11/2006.

Verified by Sonia Owen.

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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.*