

HAZTECH  
SYSTEMS,<sup>TM</sup>  
INC.

## Material Safety Data Sheet



NFPA

HMIS

PPE (See Section 15)

Health Hazard	3
Fire Hazard	0
Reactivity	2

## Section 1. Chemical Product and Company Identification

Common Name/ Trade Name	Calcium Fusion Test 2	Part # <input type="checkbox"/>	RE2127
		CAS #	1305-78-8
Manufacturer	HazTech Systems, Inc. P.O. Box 929 Mariposa, CA 95338	RTECS	EW3100000
		TSCA	TSCA 8(b) inventory: Calcium oxide
Commercial Name		CI #	Not applicable.
Synonym	Quicklime; Lime		In case of emergency contact CHEMTREC (24 hours) at 800-424-9300
Chemical Name	Calcium oxide		
Chemical Family	Alkalino terreous metal salt. (Contains Be, Mg, Ca, <input type="checkbox"/> Sr, Ba or Ra) (Salt.)		HazTech Systems, Inc. 800-337-2497
Chemical Formula	CaO		Spectrum Chemical Mfg. Corp. 310-516-8000
Supplier	Spectrum Chemical Mfg. Corp. 14422 S. San Pedro St. Gardena, CA 90248		

## Section 2. Composition and Information on Ingredients

*Exposure Limits*

Name	CAS #	TWA (mg/m <sup>3</sup> )	STEL	CEIL (mg/m <sup>3</sup> )	% by Weight
Calcium oxide	1305-78-8	5			100

Toxicological Data on Ingredients      Calcium oxide   
LD50: Not available.  
LC50: Not available

## Section 3. Hazards Identification

Potential Acute Health Effects  Very hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation. Hazardous in case of skin contact (corrosive, permeator), of eye contact (corrosive). The amount of tissue damage depends on length of contact. Eye contact can result in corneal damage or blindness. Skin contact can produce inflammation and blistering. Inhalation of dust will produce  irritation to gastrointestinal or respiratory tract, characterized by burning, sneezing and coughing. Severe over-exposure can  produce lung damage, choking, unconsciousness or 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: Not available.   
TERATOGENIC EFFECTS: Not available.   
DEVELOPMENTAL TOXICITY: Not available.   
Repeated exposure of the eyes to a low level of dust can produce eye irritation. Repeated skin exposure can produce local skin  destruction, or dermatitis. Repeated inhalation of dust can produce varying degree of respiratory irritation or lung damage.

**Section 4. First Aid Measures**

Eye Contact <input type="checkbox"/>	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. WARM water MUST be used. Get medical attention immediately.
<input type="checkbox"/>	
<input type="checkbox"/>	
Skin Contact <input type="checkbox"/>	In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing <input type="checkbox"/>
<input type="checkbox"/>	contaminated clothing and shoes. Cover the irritated skin with an emollient. Wash clothing before reuse. <input type="checkbox"/>
<input type="checkbox"/>	Thoroughly clean shoes before reuse. Get medical attention immediately.
Serious Skin Contact <input type="checkbox"/>	Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.
<input type="checkbox"/>	
Inhalation <input type="checkbox"/>	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
<input type="checkbox"/>	
Serious Inhalation <input type="checkbox"/>	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.
<input type="checkbox"/>	
<input type="checkbox"/>	
Ingestion <input type="checkbox"/>	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.
<input type="checkbox"/>	
Serious Ingestion	Not available.

**Section 5. Fire and Explosion Data**

Flammability	Non-flammable.
Auto-Ignition Temperature	Not applicable.
Flash Point <input type="checkbox"/>	Not applicable.
<input type="checkbox"/>	
Flammable Limits <input type="checkbox"/>	Not applicable.
<input type="checkbox"/>	
Products of Combustion <input type="checkbox"/>	Not available.
<input type="checkbox"/>	
Fire Hazards in Presence of Various Substances <input type="checkbox"/>	Not applicable.
<input type="checkbox"/>	
Explosion Hazards in Presence of Various Substances <input type="checkbox"/>	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.
<input type="checkbox"/>	
Fire Fighting Media and Instructions <input type="checkbox"/>	Not applicable.
<input type="checkbox"/>	
Special Remarks on Fire Hazards <input type="checkbox"/>	Chlorine Trifluoride reacts violently with calcium oxide producing flame.
<input type="checkbox"/>	
Special Remarks on Explosion Hazards	Not applicable.

**Section 6. Accidental Release Measures**

Small Spill <input type="checkbox"/>	Use appropriate tools to put the spilled solid in a convenient waste disposal container. If necessary: Neutralize the residue with a dilute solution of acetic acid.
<input type="checkbox"/>	
<input type="checkbox"/>	
Large Spill	Corrosive solid. Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water <input type="checkbox"/>
	spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. Neutralize the residue with a dilute solution of acetic acid. Be careful that the product is not present at a <input type="checkbox"/>
	concentration level above TLV. Check TLV on the MSDS and with local authorities.



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## Section 7. Handling and Storage

Precautions Keep container dry. Do not breathe dust. Never add water to this product. 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 organic materials, acids, moisture.

Storage Keep container tightly closed. Keep container in a cool, well-ventilated area. Do not store above 24°C (75.2°F).

## Section 8. Exposure Controls/Personal Protection

Engineering Controls 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.

Personal Protection Splash goggles. Synthetic apron. Vapor and dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in  Splash goggles. Full suit. Vapor and 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  Case of a Large Spill specialist BEFORE handling this product.

Exposure Limits TWA: 2 (mg/m3) from ACGIH (TLV) [United States]   
TWA: 2 (mg/m3) [Canada]   
TWA: 5 (mg/m3) from OSHA (PEL) [United States]   
Consult local authorities for acceptable exposure limits.

## Section 9. Physical and Chemical Properties

Physical State and Appearance <input type="checkbox"/>	Solid. (Crystalline solid.)	Volatility	Not available.
Molecular Weight	56.08 g/mole	Odor Threshold	Not available.
pH (1% Solution in Water)	10 [Basic]	Water/Oil Dist. Coeff.	Not available.
Boiling Point	2850°C (5162°F)	Ionicity (in Water)	Not available.
Melting Point	2572°C (4661.6°F)	Dispersion Properties	Not available.
Critical Temperature	Not available.	Solubility <input type="checkbox"/>	Soluble in acids, glycerol, sugar solution. Practically insoluble in alcohol. Very <input type="checkbox"/>
Specific Gravity	3.33 (Water = 1)		slightly soluble in cold water, hot water. Insoluble in methanol, diethyl ether, <input type="checkbox"/>
Vapor Pressure	Not applicable.	Taste	n-octanol. Not available.
Vapor Density	Not available.	Color	White.

## Section 10. Stability and Reactivity Data

Stability	The product is stable.
Instability Temperature	Not available.
Conditions of Instability	Incompatible materials.
Incompatibility with Various Substances	Reactive with organic materials, acids, moisture.
Corrosivity <input type="checkbox"/>	Not available.
Special remarks on Reactivity	Absorbs CO <sub>2</sub> from air. Reacts with fluorine to evolve much heat and some light. Reacts with water. Addition of water to Quicklime has generated temperatures as high as 800 C. Some reports describe the reaction as violent. In water, calcium oxide forms calcium hydroxide generating a large quantity of heat. Ignition of sulfur, gunpowder, wood, and straw by heat of Quicklime-water reaction has been reported. Liquid hydrofluoric acid and calcium oxide react very violently. Calcium reacts with <input type="checkbox"/> phosphorous pentoxide extremely violently when initiated by local heating. Lime becomes incandescent when heated to near <input type="checkbox"/> its melting point (2500 C).
Special Remarks on Corrosivity	Not available.
Polymerization	Will not occur.



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## Section 11. Toxicological Information

Route of Entry	Absorbed through skin. Dermal contact. Eye contact. Inhalation. Ingestion.
Toxicity to Animals	LD50: Not available. LC50: Not available.
Chronic Effects on Humans	Not available.
Other Toxic Effects on Humans	Very hazardous in case of skin contact (irritant), of ingestion, of inhalation. Hazardous in case of skin contact (corrosive, permeator), of eye contact (corrosive).
Special Remarks on Toxicity to Animals	Not available.
Special Remarks on Chronic Effects on Humans	Not available. Special Remarks on other Acute Potential Health Effects: Skin: Causes skin irritation and <input type="checkbox"/> burns. Eyes: Causes eye irritation and burns. Inhalation: Material is irritating to respiratory <input type="checkbox"/> tract and mucous membranes and upper respiratory tract. Ingestion: May be harmful if <input type="checkbox"/> swallowed. Irritates gastrointestinal tract with possible burns. Swallowing may become <input type="checkbox"/> painful, and difficult. A burning pain extends down the esophagus to the stomach. May <input type="checkbox"/> affect respiration. Vomit is thick and slimy due to mucous. Later it may contain blood shred <input type="checkbox"/> of mucous membrane due to necrosis.
Special Remarks on Other Toxic Effects on Humans	

## 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 <input type="checkbox"/> 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.
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## Section 14. Transport Information

DOT Classification	Class 8: Corrosive material.
Identification	: Calcium Oxide UNNA: 1910 PG: III
Special Provisions for Transport	Not available.
DOT (Pictograms)	



## Section 15. Other Regulatory Information and Pictograms

Federal and State Regulations <input type="checkbox"/>	Connecticut hazardous material survey.: Calcium oxide Illinois toxic substances disclosure to employee act: Calcium oxide Rhode Island RTK hazardous substances: Calcium oxide Pennsylvania RTK: Calcium oxide Minnesota: Calcium oxide Massachusetts RTK: Calcium oxide California Director's List of Hazardous Substances: Calcium oxide TSCA 8(b) inventory: Calcium oxide TSCA 8(a) chemical risk rules: Calcium oxide
California Proposition 65 Warnings	
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



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Other Classifications WHMIS (Canada) CLASS E: Corrosive solid.  
 DSCL (EEC) R38- Irritating to skin.  
 R41- Risk of serious damage to eyes.

S2- Keep out of the reach of children.  
 S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
 S39- Wear eye/face protection.  
 S46- If swallowed, seek medical advice immediately and show this container or label

HMIS (U.S.A.)

Health Hazard	3
Fire Hazard	0
Reactivity	2
Personal Protection	j

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

Flammability



WHMIS (Canada) (Pictograms)



TDG (Canada) (Pictograms)



DSCL (Europe) (Pictograms)



Protective Equipment



ADR (Europe) (Pictograms)



## Section 16. Other Information

Catalog Number(s) RE2127

References Hawley, G.G.. The Condensed Chemical Dictionary, 11e ed., New York N.Y., Van Nostrand Reinold, 1987.-Material safety data sheet (MSDS) issued by: la Commission de la Sante et de la Securite du Travail du Quebec.-SAX, N.. Dangerous Properties of Industrial Materials. Toronto, Van Nostrand Reinold, 6e ed. 1984.-The Sigma-Aldrich Library of Chemical Safety Data, Edition II.-Guide de la loi et du règlement sur le transport des marchandises dangereuses au Canada. Centre de conformité internationale. 1986.

Other Special Considerations Not available.

Validated by R. Turkington

Verified by R. Turkington

Call 1-800-543-5487

## 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.