

Material Safety Data Sheet

May be used to comply with
OSHA's Hazard Communication Standard
29 CFR 1910.1200. Standard must be
consulted for specific requirements.



REAGENT CHEMICAL & RESEARCH, INC.
124 River Road Middlesex, NJ 08848

REVISED DATE: 6/13/2003

VALID UNTIL 1/1/2008

IDENTITY
Capping Compound

Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.

Section

Product Name	CAS #
Capping Compound	Mixture, See Ingredients Information
Synonym	Chemical Formula
Concrete Capping Compound	Mixture, See Ingredients Information
Chemical Name	Chemical Family
Sulfur Mortars	Mixture

Section II - Manufacturers Information

Manufacturers Name	Address
Reagent Chemical & Research, Inc.	124 River Road Middlesex, NJ 08846
Emergency Contact	Country
Robert Dritschel	United States
Emergency Telephone	Emergency Telephone #2
1-409-962-5769	CHEMTREC 1-800-424-9300

Section III - Ingredients/Regulatory Information

Substance Description	Percent	CAS #
Sulfur	55 - 70	7704-34-9
Silicious Flour	30 - 45	68131-74-8

EXPOSURE LIMITS/REGULATORY INFORMATION

Substance	PEL	TLV	STEL	TWA	CEILING
Sulfur*	15 mg/m ³	N/D	N/D	10 mg/m ³	N/D
Silicious Flour	N/D	10 mg/m ³	N/D	N/D	N/D

N/D - Not Determined *Regulated as nuisance dust, not otherwise classified

Section IV - Hazards Identification

Appearance & Odor	Statement of Hazards
Dark Solid with no perceptable odor	May cause skin and eye irritation

Primary Route of Exposure
Skin and eye contact are the primary routes of exposure to this product

Inhalation Acute Exposure Effects
Inhalation contact may occur if the powdered material is allowed to become airborne.

Upon exposure to airborne concentrations, remove patient from contaminated area and if required, for extreme respiratory distress, administer oxygen and initiate CPR.

Skin Contact Acute Exposure Effects
Skin contact may cause minor irritation.

Eye Contact Acute Exposure Effects
Sulfur dust may be irritating to the eyes of allergic personnel, in which case wash eyes, eyelids, eye lashes, and face thoroughly with water and mild soap.

Ingestion Acute Exposure Effects
Ingestion may cause mild irritation of the mouth, throat, esophagus and stomach.

Section IV - Hazards Identification (continued)**Fire and Explosion Hazards**

The primary hazard in handling powdered Sulfur is that Sulfur dust suspended in air ignites easily and produces explosive forces in confined areas. Ignition sources can be heat, friction, pyrophoric Sulfur and internally generated static electricity. An initial small explosion can create subsequent larger explosions if the building area contains dusty powder residue on overhead surfaces such as rafters or trusses. A sulfur dust explosion will produce Sulfur Dioxide, a toxic gas.

Carcinogenicity

IARC ...No OSHA ...No ACGIH ...No

Section V - First Aid Measures**General**

Capping Compound, in the state in which it is most often used, is in the molten, liquid form at temperatures above 240 F. Thermal burns are the result of direct contact.

Inhalation

Immediately remove patient from the contaminated area. For extreme

respiratory distress administer Oxygen, medical grade, or CPR.

Skin Contact

Thermal burns to human tissue are the result of contact with the molten material.

Cool the effected area and immediately call a physician or medical facility.

Ingestion

Do not induce vomiting. If patient is unconscious, do not give anything orally.

Medical Conditions Generally Aggravated by Exposure

Sulfur dust may aggravate breathing disorders. Sulfur dust may be irritating to the eyes of allergic personnel.

Note to Physician

Attending Physician should treat exposed patients symptomatically

Section VI - Fire Fighting Measures

Flash Point 370 F	Flash Method Cleveland Open Cup
Auto-Ignition Temperature 478 - 511 F	Maximum Exposure Pressure 41 lb/sq in
Minimum Explosive Concentration 35 g/cu.m.	NFPA Rating 2 - 1 - 0 - ND
Limiting Oxygen to Prevent Ignition by Electrical Discharge 10% Oxygen	Minimum Spark Energy for Ignition 15 millijoules
Extinguishing Method Use water spray, dry chemical, carbon dioxide, sand, or foam extinguishing agents.	

Direct application of high pressure water streams may splatter burning material.

Unusual Fire and Explosion Hazards

The primary hazard in handling Capping Compound is that Sulfur dust suspended in air ignites easily and produces explosive forces in confined areas. Ignition sources can be heat, friction, pyrophoric Sulfur and internally generated static electricity.

Section VI - Fire Fighting Measures (continued)

An initial small explosion can create subsequent larger explosions if the building area contains dusty powder residue on overhead surfaces such as rafters or trusses.

A sulfur dust explosion will produce Sulfur Dioxide, a toxic gas.

Special Firefighting Procedures

Capping Compound melts and flows when burning and evolves large quantities of highly

toxic, irritating and suffocating Sulfur Dioxide. Do not enter any enclosed or confined space without proper protective equipment including self-contained breathing

apparatus. In case of fire, firemen must use a full face, self-contained breathing apparatus (Scott Air Pak or equivalent) and suitable protective equipment. Cool

area on fire with fog nozzled spray as fire may rekindle if not cooled below 300 F.

Section VII - Accidental Release Measures**Steps to be Taken in Case Material is Released or Spilled**

and an aluminum shovel (non-sparking). Do not create a dust cloud as a dust

explosion may result. DO NOT USE COMPRESSED AIR TO BLOW DOWN THE AREA.

Waste Disposal

Under Federal RCRA, it is the responsibility of the user of products to determine, at the time of disposal, whether the product falls under RCRA as a hazardous waste.

This is because product uses, transformations, mixtures, etc. may render the resulting end-product hazardous.

Container Disposal

Containers should be cleaned of residual product before disposal. Empty containers should be disposed of in accordance with all applicable laws and regulations.

Precautions to be Taken in Handling and Storage

Make sure all personnel involved in housekeeping and spill clean-up follow good Industrial Hygiene practices and wear proper protective equipment.

Section VIII - Handling/Storage/Transportation**Handling**

Wear protective equipment when handling this product in order to prevent eye and skin contact. Use approved equipment for transport of containers to avoid puncturing or rupturing containers. Do not use air pressure to empty containers. Emptied containers may retain product residues. Follow all warnings and precautions even after container is emptied.

Storage

Store away from foodstuffs or animal feed. Containers should be stored in a cool, dry well-ventilated area away from acidic or oxidizing materials. Containers which have been opened should be tightly closed when returned to storage. If outdoor storage is unavoidable, containers should be placed in an area shielded from the sun and other elements. Exercise due caution to prevent damage or leakage.

Section VIII - Handling/Storage/Transportation (continued)

General Comments

Keep containers tightly closed until ready for use. Wash thoroughly after handling.

Do not re-use any containers, as they may contain residue

Section IX - Exposure Controls/Personal Protection

Respiratory Protection (Specify Type)

If workroom exposure exceeds nuisance dust PEL, wear a NIOSH/MSHA approved dust mask.

Ventilation	Local Exhaust	Special
	If PEL exceeded	Not Applicable
	Mechanical (General)	Other
	If PEL exceeded	Not Applicable

Skin Protection

Wear work clothes, long sleeves and cotton gloves to minimize skin contact

Sulfur dust may be an eye irritant to those sensitive to such exposure. Chemical

Safety goggles of OSHA certified model ANSI Z87.1-1979, or equivalent, should be worn

Other Protection

Wear appropriate work clothing, long sleeves and cotton gloves to minimize skin

contact and wash thoroughly after each shift change. Before eating, hands and face

should be washed All food and lunches should be kept and eaten in separate lunch

rooms Do not eat, drink or smoke in work area where exposure to Sulfur is prevalent

Applicable Exposure Limits

Other than any exposure limits which may be displayed in Section 3, there are no other

known exposure limits applicable to this product or its components

Section X - Physical and Chemical Properties

Boiling Point	800 - 830 F	Specific Gravity (H ₂ O = 1)	2.01
Vapor Pressure (mm Hg)	N.A.	Melting Point	240 - 265
Vapor Density (AIR = 1)	N.A.	Evaporation rate (Butyl Acetate = 1)	N.A.
Solubility in Water	Insoluble	Burning Rate	Less than 2.2 mm (0.087 inch) per second

Appearance and Odor

Dark Solid with no perceptible odor

Section XI - Stability and Reactivity

Stability	Unstable	Conditions to Avoid Sulfur is moderately reactive. Mixtures with Chlorates, Nitrates or other red label oxidizing agents may be explosive.
	Stable	
	X	

Incompatibility (Materials to Avoid)

Mixtures with Chlorates, Nitrates or other red label oxidizing agents may explode.

Sulfur reacts with evolution of heat with Carbides, Phosphorus and Heavy Metals.

Hazardous Decomposition or By-products

Sulfur often burns in air to form Sulfur Dioxide, a toxic gas. It reacts with

hydrocarbon materials to form Hydrogen Sulfide and Carbon Disulfide - both toxic,

lethal and explosive gases.

Hazardous Polymerization	May Occur	Conditions to Avoid Sulfur is moderately reactive. Mixtures with Chlorates, Nitrates or other red label oxidizing agents may be explosive.
	Will Not Occur	
	X	

Section XII - Toxicological Information

Route(s) of Entry:	Inhalation?	Skin?	Ingestion?
	Yes	No	Yes
Health Hazards (Acute and Chronic)			
Solid capping compound is essentially non-toxic through ingestion, inhalation or skin contact. The element is not mentioned in the ACGIH book and no TLV or STEL values are reported for Workroom Air Standards.			
Hydrogen Sulfide is lethal in low concentrations and may be evolved from molten material.			
Sulfur Dioxide is a lethal gas and is evolved when Sulfur is burned in air.			
Carcinogenicity:	NTP?	IARC Monographs?	OSHA Regulated?
	No	No	No

Signs and Symptoms of Exposure

Sulfur dust is considered a nuisance dust and as such has a Permissible

Exposure Limit (PEL) of 15 mg/ cu. m.

Medical Conditions Generally Aggravated by Exposure

Sulfur dust may aggravate breathing disorders. Sulfur dust may be irritating to the eyes of allergic personnel.

Toxicology Sulfur	Irritation Data	Aquatic Toxicity
	Human Eye - 8 ppm	TLM96: 1000 ppm
Hydrogen Sulfide	Oral (rat)	Dermal (rabbit)
	LD50 - 5 g/kg	Non-toxic LT 0.5
Sulfur Dioxide	Inhalation (human)	TLV
	LCLo 600 ppm/30 min	10 ppm
	STEL 15 ppm	Peak Value (10 min) 50 ppm
Sulfur Dioxide	Eye (Rabbit) - 6 ppm	Human DNA - 5700 ppb
	Inhalation LCLo 1000 ppm/10 min	TCLo - 3 ppm/5 days

Section XIII Ecological Information**Ecological Toxicity**

The following toxicity data are available for this product:

No known toxicity data is available

Other Ecological Information

Patty - Industrial Hygiene and Toxicology, Vol 2A reports "All higher organisms require sulfur for survival, which may be naturally available in a variety of forms. Other ecological information on this product is not known.

Chemical Fate Information

Chemical fate information on this product is not known. Elemental sulfur is naturally occurring in nature.

Other Regulatory Information

No other regulatory information is available on this product.

Section XIV - Transportation Information**Regulated Material**

Capping Compound is not regulated by the US DOT as a hazardous material

Section XV - Other Information

Created By Product Safety - 6/1/98	MSDS Revision Number Revision # 004
Toxic Substances Control Act TSCA listed 7704-34-9	Superfund Amendment & Reauthorization Act, Title III Hazard Categories HEALTH: Chronic
Emergency Planning & Community Right to Know EHS - Threshold Quantity: None	PHYSICAL: None
Is product Regulated Under 1990 Clean Air Act? No	Does Product Contain, or is Manufactured with, CFC's? No
NFPA 2 - 1 - 0 - 0	HMIS 2 - 1 - 0 - X
North American Emergency Response Guide Book ID # 1350 Guide #133 1996 Revision	

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