

**KALMOR™**

**EPA Registration Number: 91411-11-59807**

**1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**

**Product identifier**

**Trade name** . . . . . : Kalmor™

**EPA Registration No.** . . . . . : 91411-11-59807

**Active Ingredient** . . . . . : Copper hydroxide,  
Bentonite, Quartz, and other proprietary ingredients

**Recommended use of the chemical and restrictions on use**

**Recommended Use** . . . . . : Fungicide Bactericide

**Uses advised against** . . . . . : No information available

**Details of the supplier of the safety data sheet**

**Company information** . . . . . : OHP, Inc.  
PO Box 746  
Bluffton, SC 29910-0746

**Phone Number** . . . . . : (800) 659-6745

**Emergency telephone numbers**

**TRANSPORTATION EMERGENCY**

**(24 hours a day) call** . . . . . : Chemtrec: 1-800-424-9300

**MEDICAL EMERGENCY (24 hours a day) and Product**

**Information call** . . . . . : 1-800-356-4647

**SDS Information**

**or Request** . . . . . : ohp.com

**2. HAZARDS IDENTIFICATION**

**Classification**

**OSHA Regulatory Status** . . : This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Oral	Category 4
Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Serious eye damage/eye irritation	Category 2B
Carcinogenicity	Category 1A

**Label elements**

**Emergency Overview**

**Danger**

**Hazard statements**

- Harmful if swallowed
- Harmful if inhaled
- Causes eye irritation
- May cause cancer



**Appearance** . . . . . : powder

**Physical state** . . . . . : Solid

**Odor** . . . . . : Slight Musty

**Precautionary Statements - Prevention**

- Obtain special instructions before use.
- Do not handle until all safety precautions have been read and understood.
- Use personal protective equipment as required.
- Wash face, hands and any exposed skin thoroughly after handling.
- Do not eat, drink or smoke when using this product.
- Avoid breathing dust/fume/gas/mist/vapors/spray.
- Use only outdoors or in a well-ventilated area.

**Precautionary Statements - Response**

- IF exposed or concerned** . . . . . : Get medical advice/attention
- IF IN EYES** . . . . . : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
If eye irritation persists: Get medical advice/attention
- IF INHALED** . . . . . : Remove victim to fresh air and keep at rest in a position comfortable for breathing
- IF SWALLOWED** . . . . . : Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth.

**Precautionary Statements - Storage**

Store locked up

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**

Not applicable

**Other Information**

May be harmful in contact with skin. Very toxic to aquatic life with long lasting effects. Very toxic to aquatic life.

**Unknown acute toxicity**

0% of the mixture consists of ingredient(s) of unknown toxicity

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### 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Substances** . . . . .: Not applicable

**Mixture**

Chemical Name	CAS No	Weight-%
Other ingredients	Proprietary	46.9
Copper hydroxide	20427-59-2	46.1
Bentonite	1302-78-9	6 - 7
Quartz	14808-60-7	0.1 - 1

If CAS number is "proprietary", the specific chemical identity and percentage of composition has been withheld as a trade secret.

### 4. FIRST AID MEASURES

**Description of first aid measures**

**General advice** . . . . .: Call a poison control center or doctor for treatment advice. Have the product containers or label with you when calling a poison control center or doctor, or going for treatment.

**Eye contact** . . . . .: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a poison control center or doctor for treatment advice.

**Skin contact** . . . . .: Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Wash contaminated clothing before reuse. If skin irritation persists, call a physician. Call a poison control center or doctor for treatment advice.

**Inhalation** . . . . .: Move victim to fresh air. If breathing is irregular or stopped, administer artificial respiration. Call a physician or poison control center immediately. Call a poison control center or doctor for treatment advice.

**Ingestion** . . . . .: Call a physician or poison control center immediately. Drink 1 or 2 glasses of water. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person.

**Self-protection of the first aider** . . . . .: Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

**Most important symptoms and effects, both acute and delayed**

**Symptoms** . . . . .: May cause redness and tearing of the eyes.

**Indication of any immediate medical attention and special treatment needed**

**Note to physicians** . . . . .: Probable mucosal damage may contraindicate the use of gastric lavage. Treat symptomatically.

### 5. FIREFIGHTING MEASURES

**Suitable extinguishing media**

Dry chemical, CO2, water spray or regular foam. Move containers from fire area if you can do it without risk. Dike fire-control water for later disposal.

**Unsuitable extinguishing media**

. . . . .: Do not scatter spilled material with high pressure water streams.

**Specific hazards arising from the chemical**

Thermal decomposition can lead to release of irritating and toxic gases and vapors. Runoff may pollute waterways.

**Explosion data**

**Sensitivity to Mechanical Impact**

. . . . .: None.

**Sensitivity to Static Discharge**

. . . . .: None.

**Protective equipment and precautions for firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Cool containers / tanks with water spray.

### 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures**

**Personal precautions** . . . . .: Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. Ensure adequate ventilation, especially in confined areas. Avoid creating dust.

**For emergency responders**

. . . . .: Use personal protection recommended in Section 8. Ventilate the area.

**Environmental precautions**

**Environmental precautions**

. . . . .: Prevent further leakage or spillage if safe to do so. Do not flush into surface water or sanitary sewer system.

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**Methods and material for containment and cleaning up**

**Methods for containment** . . . . .: Prevent dust cloud. Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** . . . . .: Avoid creating dust. Do not dry sweep dust. Wet dust with water before sweeping or use a vacuum to collect dust. Sweep up and shovel into suitable containers for disposal. Do not place spilled materials back into the original container.

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Quartz 14808-60-7	TWA: 0.025 mg/m <sup>3</sup> respirable fraction	(30)/(%SiO <sub>2</sub> + 2) mg/m <sup>3</sup> TWA total dust  (250)/(%SiO <sub>2</sub> + 5) mppcf TWA respirable fraction  (10)/(%SiO <sub>2</sub> + 2) mg/m <sup>3</sup> TWA respirable fraction	IDLH: 50mg/m <sup>3</sup> respirable dust TWA: 0.05mg/m <sup>3</sup> respirable dust

*NIOSH IDLH Immediately Dangerous to Life or Health*

**7. HANDLING AND STORAGE**

**Precautions for safe handling**

**Advice on safe handling** . . .: Avoid generation of dust. Use personal protective equipment as required. Do not breathe dust. Avoid contact with skin, eyes or clothing. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product.

**Conditions for safe storage, including any incompatibilities**

**Storage Conditions** . . . . .: Keep container tightly closed in a dry and well-ventilated place. Keep in properly labeled containers. Keep out of the reach of children. Keep away from food, drink and animal feeding stuffs. Keep away from heat. Keep away from sources of ignition - No smoking.

**Packaging materials:** . . . . . Do not reuse container.

**Incompatible materials** . . . . .: Strong acids.

**Appropriate engineering controls**

**Engineering Controls** . . . . .: Ensure adequate ventilation, especially in confined areas. Showers. Eyewash stations. Ventilation systems.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection** . . . . .: Wear safety glasses with side shields (or goggles).

**Skin and body**

**protection** . . . . .: Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

**Respiratory protection** . . . . .: Ensure adequate ventilation, especially in confined areas. Respiratory protection. Any particulate respirator equipped with an N95, R95, or P95 filter (including N95, R95, and P95 filtering facepieces) except quarter-mask respirators. The following filters may also be used: N99, R99, P99, N100, R100, P100.

**General Hygiene Considerations** . . . . .: When using do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes or clothing. Wash hands thoroughly after handling. Keep away from food, drink and animal feeding stuffs. Wash contaminated clothing before reuse.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Control parameters**

**Exposure Guidelines**

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Copper hydroxide 20427-59-2	TWA: 1 mg/m <sup>3</sup> Cu dust and mist	-	IDLH: 100 mg/m <sup>3</sup> Cu dust and mist TWA: 1 mg/m <sup>3</sup> Cu dust and mist
Bentonite 1302-78-9	TWA: 1 mg/m <sup>3</sup> respirable fraction	-	-

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### 9. PHYSICAL AND CHEMICAL PROPERTIES

#### Information on basic physical and chemical properties

**Physical state** . . . . .: Solid  
**Appearance** . . . . .: powder  
**Odor** . . . . .: Slight Musty  
**Color** . . . . .: blue green  
**Odor threshold** . . . . .: No information available

Property	Values	Remarks/ Method
pH	9.29	solution (1 %)
<b>Melting point / freezing point</b>	No information available	
<b>Boiling point / boiling range</b>	No information available	
<b>Flash point</b>	Not applicable	
<b>Evaporation rate</b>	No information available	
<b>Flammability (solid, gas)</b>	No information available	
<b>Flammability Limit in Air</b>		
<b>Upper flammability limit</b>	No information available	
<b>Lower flammability limit</b>	No information available	
<b>Vapor pressure</b>	0 mmHg	@ 25 °C
<b>Vapor density</b>	No information available	
<b>Relative density</b>	0.851 g/cm <sup>3</sup>	
<b>Water solubility</b>	dispersible	
<b>Solubility in other solvents</b>	No information available	
<b>Partition coefficient</b>	No information available	
<b>Autoignition temperature</b>	No information available	
<b>Decomposition temperature</b>	No information available	
<b>Kinematic viscosity</b>	No information available	
<b>Dynamic viscosity</b>	No information available	

**Explosive properties** . . . . .: Not an explosive

**Oxidizing properties** . . . . .: Not applicable

#### Other Information

**Softening point** . . . . .: No information available

**Molecular weight** . . . . .: No information available

**VOC Content (%)** . . . . .: No information available

**Density** . . . . .: No information available

**Bulk density** . . . . .: 53.1 lb/cu ft

### 10. STABILITY AND REACTIVITY

**Reactivity** . . . . .: No data available

**Chemical stability** . . . . .: Stable under recommended storage conditions.

#### Possibility of

**Hazardous Reactions** . . . . .: None under normal processing.

**Conditions to avoid** . . . . .: Storage near to reactive materials. Temperatures above 140°C / 284°F.

**Incompatible materials** . . . . .: Strong acids.

#### Hazardous Decomposition

**Products** . . . . .: Thermal decomposition can lead to release of irritating and toxic gases and vapors. Copper oxides.

### 11. TOXICOLOGICAL INFORMATION

#### Information on likely routes of exposure

**Product Information** . . . . .: Acute Oral LD50 (rat): >1847 mg/kg  
 Acute Dermal LD50 (rabbit): > 2000 mg/kg  
 Eye Irritation (rabbit): Moderate irritant.  
 Skin Irritation (rabbit): Not an irritant.  
 Inhalation LC50 (rat): >2.08 mg/L (4 HR)  
 Skin Sensitization (guinea pig): Not a sensitizer

**Inhalation** . . . . .: Harmful by inhalation.

**Eye contact** . . . . .: Moderately irritating to the eyes.

**Skin contact** . . . . .: Based on available data, the classification criteria are not met.

**Ingestion** . . . . .: Harmful if swallowed.

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Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Other ingredients	> 40 g/kg (Rat)	-	-
Copper hydroxide 20427-59-2	= 489 mg/kg (Rat)	> 2000 mg/kg (Rat)	= 0.5 mg/L (Rat) 4 h
Bentonite 1302-78-9	> 5000 mg/kg (Rat)	-	-
Quartz 14808-60-7	= 500 mg/kg (Rat)	-	-

### Information on toxicological effects

**Symptoms** . . . . . : May cause redness and tearing of the eyes.

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

**Sensitization** . . . . . : Based on available data, the classification criteria are not met.

**Germ cell mutagenicity** . . . : Based on available data, the classification criteria are not met.

**Carcinogenicity** . . . . . : The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Quartz 14808-60-7	A2	Group 1	Known	X

**ACGIH - (American Conference of Governmental Industrial Hygienists)**

A2 - Suspected Human Carcinogen

**IARC - (International Agency for Research on Cancer)**

Group 1 - Carcinogenic to Humans

**NTP (National Toxicology Program)**

Known - Known Carcinogen

**OSHA - (Occupational Safety and Health Administration of the US Department of Labor)**

X - Present

**Reproductive toxicity** . . . . : Based on available data, the classification criteria are not met.

**STOT - single exposure** . . . : Based on available data, the classification criteria are not met.

**STOT - repeated exposure** : Based on available data, the classification criteria are not met.

**Chronic toxicity** . . . . . : Avoid repeated exposure. May cause adverse liver effects.

**Target Organ Effects** . . . . : Eyes, kidney, liver, spleen, Respiratory system, Skin.

**Other adverse effects** . . . : The following effects occurred at levels of exposure that significantly exceed those expected under labeled usage conditions.: Liver effects, Kidney effects, microcytic ane-

mia, Information given is based on data obtained from similar substances.

**Aspiration hazard** . . . . . : Based on available data, the classification criteria are not met.

### Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document

Refer to product information above.

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

Very toxic to aquatic life with long lasting effects

96 h LC50 (Oncorhynchus mykiss (rainbow trout)) - 0.24 mg/l

48 h EC50 (Daphnia magna (Water flea)) - 0.118 mg/l

This pesticide is toxic to fish and aquatic invertebrates and may contaminate water through runoff. This product has a potential for runoff for several months or more after application. Poorly draining soils and soils with shallow water tables are more prone to produce runoff that contains this product. For terrestrial uses, do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment wash-waters or rinsate. Drift and runoff may be hazardous to aquatic organisms in waters adjacent to treated areas.

47.2 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Copper hydroxide 20427-59-2	0.00939: 72 h Pseudokirchneriella subcapitata mg/L EC50	0.135: 96 h Oncorhynchus mykiss (rainbow trout) mg/L LC50	0.0422: 48 h Daphnia magna mg/L EC50
Bentonite 1302-78-9	-	19000: 96 h Oncorhynchus mykiss mg/L LC50 static 8.0 - 19.0: 96 h Salmo gairdneri g/L LC50	-

### Persistence and degradability

Not readily biodegradable.

### Bioaccumulation

Not likely to bioaccumulate.

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**Other adverse effects**

This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT)

**Description** . . . . .: UN3077, Environmentally hazardous substance, solid, n.o.s. (Copper hydroxide), 9, III; Marine Pollutant

**13. DISPOSAL CONSIDERATIONS**

**Waste treatment methods**

**Disposal of wastes** . . . . .: Pesticide wastes may be acutely hazardous. Improper disposal is a violation of federal law. Disposal should be in accordance with applicable regional, national and local laws and regulations. Contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance on proper disposal of waste product.

**Contaminated packaging** . . . . .: Disposal should be in accordance with applicable regional, national and local laws and regulations. Consult product label for additional information. Do not reuse container.

Chemical Name	California Hazardous Waste Status
Copper hydroxide 20427-59-2	Toxic

**14. TRANSPORT INFORMATION**

**DOT** . . . . .: Not regulated

**TDG** . . . . .: Not regulated

**IATA**

**UN/ID no** . . . . .: UN3077

**Proper shipping name** . . . . .: Environmentally hazardous substance, solid, n.o.s.

**Hazard Class** . . . . .: 9

**Packing Group** . . . . .: III

**ERG Code** . . . . .: 9L

**Special Provisions** . . . . .: A97, A158, A179, A197

**Description** . . . . .: UN3077, Environmentally hazardous substance, solid, n.o.s. (Copper hydroxide), 9, III

**IMDG**

**UN/ID no** . . . . .: UN3077

**Proper shipping name** . . . . .: Environmentally hazardous substance, solid, n.o.s.

**Hazard Class** . . . . .: 9

**Packing Group** . . . . .: III

**EmS-No.** . . . . .: F-A, S-F

**Special Provisions** . . . . .: 274, 335, 966, 967

**15. REGULATORY INFORMATION**

**International Inventories**

**TSCA** . . . . .Complies

**DSL/NDSL** . . . . .Complies

**EINECS/ELINCS** . . . . .Complies

**IECSC** . . . . .Complies

**KECL** . . . . .Complies

**PICCS** . . . . .Complies

**AICS** . . . . .Complies

**Legend:**

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

**ENCS** - Japan Existing and New Chemical Substances

**IECSC** - China Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**AICS** - Australian Inventory of Chemical Substances

**US Federal Regulations**

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	SARA 313 - Threshold Values %
Copper hydroxide - 20427-59-2	1.0

**SARA 311/312 Hazard Categories**

**Acute health hazard** . . . . .: Yes

**Chronic Health Hazard** . . . . .: Yes

**Fire hazard** . . . . .: No

**Sudden release of pressure hazard** . . . . .: No

**Reactive Hazard** . . . . .: No

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**CWA (Clean Water Act)**

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA Reportable Quantities	CWA Toxic Pollutants	CWA Priority Pollutants	CWA Hazardous Substances
Copper hydroxide 20427-59-2	-	X	-	-

**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

**US State Regulations**

**California Proposition 65**

This product contains the following Proposition 65 chemicals

Chemical Name	California Proposition 65
Quartz 14808-60-7	Carcinogen

**U.S. State Right-to-Know Regulations**

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Copper hydroxide 20427-59-2	X	-	X
Quartz 14808-60-7	X	X	X

**U.S. EPA Label Information**

**EPA Pesticide Registration Number 91411-11-59807**

**EPA Statement**

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

**Difference between SDS and EPA Pesticide label**

**CAUTION:** Causes moderate eye irritation. Harmful if swallowed or absorbed through the skin. Avoid contact with eyes, skin, or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse.

**16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION**

	Health hazards	Flammability	Instability	Physical and Properties Chemical
<b>NFPA</b>	2	1	0	-
	Health hazards	Flammability	Physical hazards	Personal protection
<b>HMIS</b>	2*	1	0	X

*Chronic Hazard Star Legend \* = Chronic Health Hazard*

**Revision Date** . . . . . : Aug 28, 2018

**Revision Note** . . . . . : No information available

**Disclaimer** . . . . . : The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.