

## SAFETY DATA SHEET

### 1. Product and Company Identification

**Chimfex**

**Identified Use:** Chimney fire suppressant      **Use Advised Against:** Do not use indoors or inside a vehicle

**Manufacturers Information**      Orion Safety Products  
3157 North 500 West      **EMERGENCY**      CHEMTREC  
Peru, IN 46970      US 1-800-851-5260      1-800-424-9300  
Intl (11) 1-765-472-4375

### 2. Hazards Identification

**GHS Classifications**

Explosive	Category 1.4	H204
Skin Irritation	Category 2	H315
Eye Irritation	Category 2A	H319
Respiratory Sensitizer	Category 1B	H334
Skin Sensitizer	Category 1B	H317
Carcinogenicity	Category 2	H351
Aquatic Environment – Acute	Category 1	H400
Aquatic Environment – Chronic	Category 1	H411

**GHS Label Elements**

Pictograms



Hazard Statements

H204	Fire or projection hazard
H315	Causes skin irritation
H319	Causes serious eye irritation
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317	May cause an allergic skin reaction
H351	Suspected of causing cancer
H400	Very toxic to aquatic life
H411	Toxic to aquatic life with long lasting effects

Signal Word      **Danger**

**Precautionary Statements**

P103	Keep out of reach of children	P301/315	IF SWALLOWED: Get immediate medical advice /attention.
P210	Keep away from heat/sparks/open flames/hot surfaces. – No smoking.	P302/352	IF ON SKIN: Wash with plenty of soap and water.
P264	Wash hands thoroughly after handling.	P304/340/342	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
P270	Do not eat, drink or smoke when using this product.	P305/338/351	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P271	Use only outdoors or in a well-ventilated area.	P333/313	If skin irritation or rash occurs, get medical advice/attention.
P280	Wear protective eye, body and hand protection	P370	In case of fire: use water deluge
P273	Avoid release to the environment		

**Hazards Not Otherwise Classified (HNOC):** none

### 3. Composition / Information on Ingredients

Component	CAS #	EINCS #	%age
Zinc dust	7440-66-6	231-175-3	<50%
Sulfur	7704-34-9	231-722-6	<20%
Potassium Nitrate	7757-79-1	231-818-8	<20%
Strontium Nitrate	10042-76-9	233-131-9	<15%
Paraffinic Oil	64742-54-7	232-384-2	<5%
Sawdust	9004-34-6	232-674-9	<5%
Sodium Bicarbonate	144-55-8	205-633-8	<5%

Note: Due to Confidential Business Information i.e "Trade Secrets", the exact percentage of each ingredient has not been disclosed. CBI information will be shared with appropriate authorities if circumstances warrant.

### 4. First Aid Measures

**Description of first aid measures**

<b>Inhalation</b>	If smoke or contents are inhaled, remove to fresh air. Watch for signs of allergic reaction. Use a bronchodilator inhaler if directed by asthma patient. If not breathing, give artificial respiration and get medical aid. Inhalation of zinc oxide fumes may cause an influenza-like illness termed metal fume fever. Symptoms, which appear several hours following exposure, include chills, lassitude, malaise, frontal headache, low-back pain, muscle cramps, and vomiting. Get medical aid immediately if these symptoms appear.
<b>Skin</b>	If contents are contacted, wash with area with soap and water for 15 minutes. Remove contaminated clothing and wash before

reuse. Get medical aid if irritation occurs.  
**Eyes** If contents get into eye, flush with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids. Remove contact lenses if easily possible. Get medical aid immediately.  
**Ingestion** Get medical aid immediately.

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

See section 2 labeling and section 11

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

Inhalation of zinc oxide fumes may cause an influenza-like illness termed metal fume fever. Symptoms, which appear several hours following exposure, include chills, lassitude, malaise, frontal headache, low- back pain, muscle cramps, and vomiting. Get medical aid immediately if these symptoms appear.

**5. Firefighting Measures**

<b>Extinguishing Media</b>	Water deluge	<b>Unsuitable Extinguishing Media</b>	Foam and dry chemical extinguishers and suffocation are ineffective.
<b>Protective Equipment and Precautions for Firefighters</b>	Wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode. Prevent further propagation of fire by spraying unburnt nearby product with water. Combat fire from a sheltered position. Devices will burn readily in a fire situation generating zinc oxide fumes. Firemen exposed to contaminated smoke should be immediately relieved and checked for symptoms of exposure to toxic gasses. <i>Seek medical attention immediately!</i> This should not be mistaken for heat exhaustion or smoke inhalation. These are extremely irritating to the respiratory tract and may cause breathing difficulty and pulmonary edema. Symptoms may be delayed several hours or longer depending upon exposure.		
<b>Specific Hazards Arising from the Chemical</b>	Flame and sparks are ejected out the open end of the flare when it functions. Burning unit produces copious amounts of white smoke containing zinc oxide fumes. Avoid contact with smoke. Contents may ignite and burn explosively when suspended in air and exposed to open flame or spark.		
<b>Further information</b>	No data available		

**6. Accidental Release Measures**

**Personal Precautions / Protective Equipment / Emergency Procedures**

Do not breathe contents and avoid contact with skin and eyes. Wear flame retardant clothing with long sleeves, dust mask, rubber or nitrile gloves, safety goggles, safety shoes. Avoid friction on the released product. Keep away from ignition sources.

**Environmental Precautions**

Prevent dispersion of contents on soil and in water. Prevent contents from spreading or entering into drains, ditches, groundwater or rivers by using appropriate barriers.

**Methods for Containment and Clean-up**

Use caution when cleaning up spilled product contents. Remove heat, flames, sparks and other sources of ignition. Use non-sparking tools and equipment. Prevent buildup of electrostatic charges by grounding. Clean spills in a manner that does not disperse dust into the air. Do not absorb in sawdust or other combustible absorbents. Pick up spill for recovery or disposal and place in an approved container. Wash away remainder with plenty of water. Collect wash water for approved disposal.

**7. Handling and Storage**

**Precautions for Safe Handling**

Always call your local fire department first if you have a chimney fire. Always point Chimfex away from face and body while igniting and afterward. Fumes harmful if inhaled. Exercise caution when using this product since molten flecks may be emitted. Avoid contact with clothing and other combustible materials. Wear eye protection during use. Follow instructions on package. Ignite product over fireplace hearth or fire-proof stove board. Product is designed for emergency use, do not attempt to ignite or burn this product inside a building or vehicle for demonstration or recreational use. Burning unit produces copious amounts of white smoke containing zinc oxide fumes. Avoid contact with smoke

**Conditions for Safe Storage, Including Any Incompatibilities**

Store in a cool, dry, well-ventilated place away from all sources of ignition. Store away from food and beverages. Store away from flammable materials. Store at ambient temperature. Do not store partially burned Chimfex in a vehicle, closed container, warehouse, or any other building.

**8. Exposure Controls / Personal Protection**

**Control parameters**

Exposure Limits	OSHA PEL	ACGIH TLV
Zinc dust	5 (fume) mg/m3	5 (fume) mg/m3
Sulfur	Not Established	Not Established
Potassium Nitrate	nuisance dust 15 mg/m <sup>3</sup> .	nuisance dust 15 mg/m <sup>3</sup> .
Strontium Nitrate	Not Established	Not Established
Paraffinic Oil	5 mg/m3	TWA 5 mg/m3
Sawdust	15 mg/m3	10 mg/m3
Sodium Bicarbonate	Not Established	Not Established

**Exposure controls**

Burning unit produces copious amounts of white smoke containing zinc oxide fumes. Avoid contact with smoke. When used in a confined or restricted space area use NIOSH/MSHA approved SCBA. When cleaning up powder, use local and/or general exhaust.

**Engineering Controls**

**Personal Protective Equipment**

<b>Eye / Face Protection</b>	Safety glasses or goggles
<b>Skin Protection</b>	None under normal conditions when using product unless prolonged handling is anticipated. Impervious protective clothing, including gloves, boots, and a lab coat, apron or coveralls, as appropriate, when cleaning up spilled product. Wash hands and face before eating, drinking or using tobacco products.
<b>Respiratory Protection</b>	None under normal conditions when using product. A particulate respirator (NIOSH t N95 or better filters) may be worn during the cleanup of spilled materials.
<b>General Hygiene</b>	Use product outdoors away from combustible products. For cleanup of spilled materials, emergency showers and eye wash stations should be available. Educate and train employees in the safe use and handling of hazardous materials.

## 9. Physical and Chemical Properties

<b>Appearance (color, physical form, shape):</b> Grey powder		<b>Melting Point:</b> Not available	<b>Solubility:</b> Not available
<b>pH:</b> Not available	<b>Freezing Point:</b> Not applicable	<b>Evaporation Rate:</b> Not applicable	
<b>Boiling Point / Range:</b> Not applicable	<b>Specific Gravity:</b> Not applicable	<b>Vapor Density:</b> Not applicable	
<b>Vapor Pressure:</b> Not applicable	<b>Odor Threshold:</b> No data available	<b>Flash Point:</b> Not available	
<b>Odor:</b> No data available	<b>Flammability Limits:</b> No data available	<b>Relative Density:</b> No data available	
<b>Flammability:</b> No data available	<b>Viscosity:</b> No data available		
<b>Partition Coefficient:</b> No data available		<b>Decomposition Temperature:</b> No data available	
<b>Auto Ignition Temperature:</b> No data available			

## 10. Stability and Reactivity

<b>Chemical Stability</b> Stable	<b>Reactivity:</b> No information available	<b>Possibility of Hazardous Reactions</b> Hazardous polymerization will not occur
<b>Conditions to Avoid</b> Combustible materials, heat, flames, sparks and other sources of ignition. Moisture.	<b>Incompatible Materials</b> Strong oxidizers, acids, chlorate salts	<b>Hazardous Decomposition Products</b> Carbon monoxide, nitrogen oxides, sulfur oxides, and zinc oxide fumes.

## 11. Toxicology Information

### Ingredient acute toxicity information

Toxicology	Oral LD50	skin LD50	LC50
Zinc dust	Rat: 3000 mg/kg	Not available	Not available
Sulfur	Rat: >5000 mg/kg	Rat: >2000 mg/kg	Rat: 4 h - 5.434 mg/l
Potassium Nitrate	Rat: 3750 mg/kg	Not available	Not available
Strontium Nitrate	Rat: 1892 mg/kg	Not available	Not available
Paraffinic Oil	Rat: >2000 mg/kg	Rat: >2000 mg/kg	No information found
Sawdust	not available	Not available	Not available
Sodium Bicarbonate	Rat: 4220 mg/kg	Not available	Not available

### Product toxicological information

<b>Acute Toxicity</b>	Not classified – <i>Acute Toxicity Estimate yields oral LD<sub>50</sub> over 5000 mg/kg bw</i>
<b>Skin Irritation / Corrosion</b>	Category 2 – <i>over 10% of ingredients classified as a Category 2</i>
<b>Serious Eye Damage / Irritation</b>	Category 2A – <i>over 10% of ingredients classified as a Category 2A</i>
<b>Respiratory / Skin Sensitization</b>	Respiratory - <i>Category 1B over 0.1% of ingredients classified as a Category 1</i> Skin – <i>Category 1B over 0.1% of ingredients classified as a Category 1</i>
<b>Germ Cell Mutagen</b>	No information found
<b>Carcinogen</b>	Category 2 - <i>over 0.1% of ingredients classified as a Category 2</i>
<b>Reproductive Toxicity</b>	No information found
<b>STOT – single exposure</b>	No information found
<b>STOT – repeated exposure</b>	No information found
<b>Aspiration Hazard</b>	No information found
<b>Likely routes of exposure</b>	Skin, ingestion, inhalation
<b>Symptoms related to the physical, chemical and toxicological characteristics</b>	Inhalation of zinc oxide fumes may cause an influenza-like illness termed metal fume fever. Symptoms, which appear several hours following exposure, include chills, lassitude, malaise, frontal headache, low- back pain, muscle cramps, and vomiting. Possible irritation of nasal passages, coughing and fever.
<b>Delayed and immediate effects and chronic effects from short and long term exposure</b>	Individuals with known allergies to sulfide drugs may also have allergic reactions to elemental sulfur. Contents could cause severe irritation, possible mild chemical burns, to the eyes. Inhalation of smoke will irritate eyes, lungs and mucus membranes. Avoid breathing smoke whenever possible. Inhalation of zinc oxide fumes may cause an influenza-like illness termed metal fume fever. Prolonged or repeated skin contact with contents may cause dermatitis
<b>Interactive effects</b>	No information found

## 12. Ecological Information

### Ingredient toxicity / persistence / degradability / bioaccumulation / mobility in soil and water

**Aquatic Toxicity** Strontium Nitrate: *Acute toxicity - Fishes, Carassius auratus, LC100, 9,615 mg/l; Chronic toxicity - Fishes, Gasterosteus*

*aculeatus*, LC100, 2.912 mg/l

**Sulfur:** Toxicity to fish LC50 - *Oncorhynchus mykiss* (rainbow trout) - > 180 mg/l - 96 h Toxicity to daphnia and other aquatic invertebrates: EC50 - *Daphnia magna* (Water flea) - > 5,000 mg/l - 48 h

**Potassium Nitrate:** fish: *Guppy* (*Poecilia Reticulata*) LC50 180 mg/L (96 h); zooplankton: *Daphnia magna* LC50 490mg/l - 48hr

**Sodium Bicarbonate:** Fishes, *Oncorhynchus mykiss*, LC50, 96 h, 7,700 mg/l/- Fishes, *Oncorhynchus mykiss*, NOEC, 96 h, 2,300 mg/l; - Fishes, *Lepomis macrochirus*, LC50, 96 h, 7,100 mg/l; - Fishes, *Lepomis macrochirus*, NOEC, 96 h, 5,200 mg/l; - Crustaceans, *Daphnia magna*, EC50, 48 h, 4,100 mg/l; - Crustaceans, *Daphnia magna*, NOEC, 48 h, 3,100 mg/l

**Persistence / Degradability**  
**Bioaccumulation / Accumulation**  
**Mobility in Environmental Media**

No information found

No information found

**Strontium Nitrate:** Water: considerable solubility and mobility; Soil/sediments non-significant adsorption

**Potassium Nitrate:** Predicted Distribution : Water, 45% ; Soil, 54.7%

**Other adverse effects**

No information found

### 13. Disposal Considerations

#### Disposal methods

Chimfex should be allowed to burn to completion. Partially burned or unburned items, spilled contents, and ash from burned Chimfex should be disposed of in accordance with federal, state, and local requirements. Consult factory for any additional disposal concerns.

### 14. Transportation Information

	ID Number	shipping name	hazard class	packing group	EX Number	Reportable Quantities
United States	UN3178	ORM-D / Limited Quantity	Not applicable	Not applicable	Not applicable	none

Marine Pollutant: no

Special precautions for user: No information available

### 15. Regulatory Information

US Regulations	TSCA	CERCLA	CWA	CAA	SARA 313	SARA 302	Acute	Chronic	Fire	Reactivity	Pressure
Zinc	yes	yes	yes	no	yes	no	yes	No	yes	yes	no
Sulfur	yes	no	no	no	no	no	yes	no	yes	no	no
Potassium Nitrate	yes	no	no	no	yes	no	no	no	no	yes	no
Strontium Nitrate	yes	no	no	no	yes	no	yes	no	no	yes	no
Paraffinic Oil	yes	no	no	no	no	no	no	no	no	no	no
Sawdust / Wood flour	no	no	no	no	no	no	yes	yes	no	no	no
Sodium Bicarbonate	yes	no	no	no	no	no	yes	yes	no	no	no

US States	Prop 65	NJ	PA	Canada	WHMIS	DSL	Europe	wgk
Zinc	no	yes	yes		B6 Reactive flammable material	yes		nwg
Potassium Nitrate	no	yes	yes		C Oxidizing materials	yes		1
Strontium Nitrate	no	yes	no		C Oxidizing materials D1B Toxic materials D2B Toxic materials	yes		2
Paraffinic Oil	no	yes	no		Not controlled	yes		not listed
Sawdust / Wood flour	yes	yes	yes		D2A Very toxic materials	yes		not listed
Sodium Bicarbonate	no	no	no		D2B Toxic materials	yes		1

### 16. Other Information

Revision Information: October, 2015

NFPA Rating		HMIS Rating	
Flammability	1	Flammability	1
Health	2	Health	2
Reactivity	1	Physical Hazard	1

#### Key / Legend:

HMIS: hazardous material identification system  
NFPA: national fire protection association  
CAS: Chemical Abstracts Service number  
EINECS: European inventory of existing chemical substances  
OSHA PEL: occupational safety and health administration permissible exposure limit  
NIOSH TLV: national institute of occupational safety and health Threshold Limit Value  
NTP: National Toxicology Program  
IARC: International Agency for Research on Cancer

TSCA: toxic substance control act - US  
CERCLA: comprehensive environmental response, compensation and liability act - US  
CWA: clean water act - US  
CAA: clean air act - US  
SARA: superfund amendments and reauthorization act - US  
PROP 65: California's Proposition 65 list  
WHMIS: workplace hazardous materials information system - Canada  
DSL: Domestic Substances List - Canada  
WGK: water hazard classes - Germany

#### Legal Statement

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