



**SAFETY DATA SHEET**  
**Ultrox S, Ultrox S+, Ultrox S+K, Ultrox Z+**

**1. Identification**Product identifier

**Product name** Ultrox S, Ultrox S+, Ultrox S+K, Ultrox Z+  
**Product number** 51415,51451,51451(K),51453

Recommended use of the chemical and restrictions on use

**Application** Ceramic

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

**Supplier:** Trebol Florida LLC  
11400 New Berlin Road  
Jacksonville  
Florida  
32226  
USA  
Tel. ++1 904 751 2828  
Fax ++1 904 751 6828

Emergency telephone number

**Emergency telephone** ++1 904 607 3011

**2. Hazard(s) identification**Classification of the substance or mixture

**Physical hazards** Not Classified  
**Health hazards** Carc. 1A - H350 STOT RE 1 - H372  
**Environmental hazards** Not Classified

Label elements**Pictogram**

**Signal word** Danger

**Hazard statements** H350 May cause cancer.  
H372 Causes damage to organs through prolonged or repeated exposure.

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<b>Precautionary statements</b>	<p>P201 Obtain special instructions before use.</p> <p>P260 Do not breathe vapor/spray.</p> <p>P264 Wash contaminated skin thoroughly after handling.</p> <p>P270 Do not eat, drink or smoke when using this product.</p> <p>P280 Wear protective gloves/protective clothing/eye protection/face protection.</p> <p>P308+P313 If exposed or concerned: Get medical advice/attention.</p> <p>P405 Store locked up.</p> <p>P501 Dispose of contents/container in accordance with national regulations.</p>
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**Contains** Crystalline Silica / Silicon Dioxide

### 3. Composition/information on ingredients

#### Mixtures

<b>Zirconium silicate</b>	<b>95 - 100%</b>
CAS number: 14940-68-2	
<b>Classification</b> Not Classified	
<b>Crystalline Silica / Silicon Dioxide</b>	<b>1 - 4%</b>
CAS number: 14808-60-7	
<b>Classification</b> Carc. 1A - H350 STOT RE 1 - H372	

The Full Text for all Hazard Statements are Displayed in Section 16.

### 4. First-aid measures

#### Description of first aid measures

<b>Inhalation</b>	Move affected person to fresh air at once.
<b>Ingestion</b>	Rinse mouth thoroughly with water. Give plenty of water to drink. Keep affected person under observation. Get medical attention if any discomfort continues. Show this Safety Data Sheet to the medical personnel.
<b>Skin Contact</b>	Remove contaminated clothing and rinse skin thoroughly with water.
<b>Eye contact</b>	Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention if irritation persists after washing. Show this Safety Data Sheet to the medical personnel.

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

**General information** Not available.

#### Indication of immediate medical attention and special treatment needed

**Notes for the doctor** No specific recommendations.

### 5. Fire-fighting measures

#### Extinguishing media

<b>Suitable extinguishing media</b>	The product is non-combustible. Use fire-extinguishing media suitable for the surrounding fire.
<b>Unsuitable extinguishing media</b>	None.

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### Special hazards arising from the substance or mixture

<b>Specific hazards</b>	None. No unusual fire or explosion hazards noted.
<b>Hazardous combustion products</b>	No known hazardous decomposition products.
<b><u>Advice for firefighters</u></b>	
<b>Protective actions during firefighting</b>	No specific firefighting precautions known.
<b>Special protective equipment for firefighters</b>	Use protective equipment appropriate for surrounding materials.

### 6. Accidental release measures

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

<b>Personal precautions</b>	Ensure suitable respiratory protection is worn during removal of spillages in confined areas. For personal protection, see Section 8.
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#### Environmental precautions

<b>Environmental precautions</b>	Do not discharge into drains or watercourses or onto the ground.
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#### Methods and material for containment and cleaning up

<b>Methods for cleaning up</b>	Collect powder using special dust vacuum cleaner with High-Efficiency Particulate Arrestance (HEPA) vacuum filter or carefully sweep into suitable waste disposal containers and seal securely. Wash thoroughly after dealing with a spillage.
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<b>Reference to other sections</b>	For personal protection, see Section 8. For waste disposal, see section 13.
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### 7. Handling and storage

#### Precautions for safe handling

<b>Usage precautions</b>	Good personal hygiene procedures should be implemented. Use mechanical ventilation if there is a risk of handling causing formation of airborne dust. Avoid eating, drinking and smoking when using the product.
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#### Conditions for safe storage, including any incompatibilities

<b>Storage precautions</b>	Store in tightly-closed, original container. Store locked up. Keep container dry.
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#### Specific end uses(s)

<b>Specific end use(s)</b>	Not known.
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### 8. Exposure Controls/personal protection

#### Control parameters

#### Occupational exposure limits

##### **Zirconium silicate**

Long-term exposure limit (8-hour TWA): ACGIH	5 mg/m <sup>3</sup>
Short-term exposure limit (15-minute): ACGIH	10 mg/m <sup>3</sup>
Long-term exposure limit (8-hour TWA): OSHA	5 mg/m <sup>3</sup>
Short-term exposure limit (15-minute): OSHA	10 mg/m <sup>3</sup>

##### **Crystalline Silica / Silicon Dioxide**

Long-term exposure limit (8-hour TWA): ACGIH	0.025 mg/m <sup>3</sup>	respirable fraction
A2		
Long-term exposure limit (8-hour TWA): OSHA	0.05 mg/m <sup>3</sup>	

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ACGIH = American Conference of Governmental Industrial Hygienists.

A2 = Suspected Human Carcinogen.

OSHA = Occupational Safety and Health Administration.

### Exposure controls

<b>Appropriate engineering controls</b>	Provide adequate ventilation. Avoid inhalation of dust. Observe any occupational exposure limits for the product or ingredients.
<b>Eye/face protection</b>	Wear tight-fitting, dust-resistant, chemical splash goggles if airborne dust is generated.
<b>Hand protection</b>	For prolonged or repeated skin contact use suitable protective gloves.
<b>Other skin and body protection</b>	No specific recommendations.
<b>Respiratory protection</b>	If respiratory protection is necessary, respirator usage is recommended as follows: A NIOSH-approved tight fit respirator with an organic vapor cartridge and an N, R or P100 filter should be worn, or an air supplied full face respirator or hood should be worn.
<b>Thermal hazards</b>	Not relevant.

## 9. Physical and Chemical Properties

### Information on basic physical and chemical properties

<b>Appearance</b>	Powder.
<b>Color</b>	White/off-white.
<b>Odor</b>	Odorless.
<b>Odor threshold</b>	Not applicable.
<b>pH</b>	pH (concentrated solution): ~ 6.3
<b>Melting point</b>	2550°C
<b>Initial boiling point and range</b>	Not available.
<b>Flash point</b>	Not applicable.
<b>Evaporation rate</b>	Not applicable.
<b>Flammability (solid, gas)</b>	Not applicable.
<b>Upper/lower flammability or explosive limits</b>	Not applicable.
<b>Vapour pressure</b>	Not applicable.
<b>Vapour density</b>	Not applicable.
<b>Relative density</b>	4.6 g/ml @ °C
<b>Solubility(ies)</b>	Insoluble in water.
<b>Partition coefficient</b>	Not applicable.
<b>Auto-ignition temperature</b>	Not applicable.
<b>Decomposition Temperature</b>	Not applicable.
<b>Viscosity</b>	Not applicable.
<b>Explosive properties</b>	Not considered to be explosive.
<b>Other information</b>	None.

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### 10. Stability and reactivity

<b>Reactivity</b>	There are no known reactivity hazards associated with this product.
<b>Stability</b>	No particular stability concerns.
<b>Possibility of hazardous reactions</b>	Not known. Will not polymerize.
<b>Conditions to avoid</b>	There are no known conditions that are likely to result in a hazardous situation.
<b>Materials to avoid</b>	No specific material or group of materials is likely to react with the product to produce a hazardous situation.
<b>Hazardous decomposition products</b>	No known hazardous decomposition products.

### 11. Toxicological information

#### Information on toxicological effects

<b>General information</b>	<p>Zirconium Silicate contains small quantities of radioactive isotopes of Uranium and Thorium. The average concentrations in Zirconium Silicate are 300 ppm of Uranium and 180 ppm of Thorium. The radioactivity of Zirconium Silicate is due to its natural radionuclides which are not processed, and which have not been processed, in view of their radioactive, fissile or fertile properties.</p> <p>Work activities involving Zirconium Silicates are regulated under a specific regulation (Council Directive 96/29/EURATOM of 13 May 1996), which is different to that concerning radioactive substances. This Directive, establishes the need to assess the radiation exposure to which workers are or may be exposed. The radiation level established by the International Commission on Radiological Protection (ICRP) sets an annual radiation dose of 1 mSv over which physical surveillance of workers becomes required. This value has been adopted by the Commission of the European Communities.</p> <p>Studies c have concluded that when workers exposure to Zirconium Silicate is continuous (2000 hours per year), the radiation dose may reach 1 mSv over the year.</p>
<b>Inhalation</b>	<p>Prolonged and/or massive exposure to respirable crystalline silica-containing dust may cause silicosis, a nodular pulmonary fibrosis caused by deposition in the lungs of fine respirable particles of crystalline silica. IARC Classification Group 1: human carcinogenic.</p>
<b>Skin Contact</b>	Skin irritation should not occur when used as recommended.
<b>Eye contact</b>	Particles in the eyes may cause irritation and smarting.
<b>Acute and chronic health hazards</b>	Frequent inhalation of dust over a long period of time increases the risk of developing lung diseases.

#### Toxicological information on ingredients.

##### Zirconium silicate

##### Carcinogenicity

IARC carcinogenicity      Not listed.

OSHA Carcinogenicity      Not listed.

##### Crystalline Silica / Silicon Dioxide

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### Carcinogenicity

<b>IARC carcinogenicity</b>	IARC Group 1 Carcinogenic to humans.
<b>NTP carcinogenicity</b>	Known human carcinogen.
<b>OSHA Carcinogenicity</b>	Not listed.

## 12. Ecological Information

**Ecotoxicity** There are no data on the ecotoxicity of this product. The product components are not classified as environmentally hazardous. However, large or frequent spills may have hazardous effects on the environment.

### Toxicity

**Toxicity** Not considered toxic to fish.

**Acute toxicity - fish** Not available.

**Acute toxicity - aquatic invertebrates** Not available.

**Acute toxicity - aquatic plants** Not available.

**Acute toxicity - microorganisms** Not available.

**Acute toxicity - terrestrial** Not available.

### Persistence and degradability

**Persistence and degradability** The product is not biodegradable.

### Bioaccumulative potential

**Bio-Accumulative Potential** No data available on bioaccumulation.

**Partition coefficient** Not applicable.

### Mobility in soil

**Mobility** Not known.

### Results of PBT and vPvB assessment

**Results of PBT and vPvB assessment** Not applicable.

### Other adverse effects

**Other adverse effects** Not available.

## 13. Disposal considerations

### Waste treatment methods

**Disposal methods** Waste should be treated as controlled waste. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

## 14. Transport information

**General** The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, DoT).

### UN Number

**Ultrox S, Ultrox S+, Ultrox S+K, Ultrox Z+**

Not applicable.

**UN proper shipping name**

Not applicable.

**Transport hazard class(es)**

No transport warning sign required.

**Packing group**

Not applicable.

**Environmental hazards****Environmentally Hazardous Substance**

No.

**Special precautions for user**

Not applicable.

**Transport in bulk according to** Not applicable.

**Annex II of MARPOL 73/78**

**and the IBC Code**

**15. Regulatory information****Regulatory Status**

Not subject to the provisions of SARA 313 Title III. Not subject to TSCA Export Notification Section 12b.

**US Federal Regulations****SARA Section 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities**

None of the ingredients are listed or exempt.

**SARA 313 Emission Reporting**

None of the ingredients are listed or exempt.

**OSHA Highly Hazardous Chemicals**

None of the ingredients are listed or exempt.

**US State Regulations****California Proposition 65 Carcinogens and Reproductive Toxins**

The following ingredients are listed or exempt:

**Crystalline Silica / Silicon Dioxide**

**California Air Toxics "Hot Spots" (A-I)**

None of the ingredients are listed or exempt.

**California Air Toxics "Hot Spots" (A-II)**

None of the ingredients are listed or exempt.

**California Directors List of Hazardous Substances**

The following ingredients are listed or exempt:

**Crystalline Silica / Silicon Dioxide**

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### Massachusetts "Right To Know" List

The following ingredients are listed or exempt:

**Crystalline Silica / Silicon Dioxide**

### Rhode Island "Right To Know" List

The following ingredients are listed or exempt:

**Crystalline Silica / Silicon Dioxide**

### Minnesota "Right To Know" List

The following ingredients are listed or exempt:

**Crystalline Silica / Silicon Dioxide**

### New Jersey "Right To Know" List

The following ingredients are listed or exempt:

**Crystalline Silica / Silicon Dioxide**

### Pennsylvania "Right To Know" List

The following ingredients are listed or exempt:

**Crystalline Silica / Silicon Dioxide**

### Inventories

#### EU - EINECS/ELINCS

All the ingredients are listed or exempt.

#### Canada - DSL/NDSL

All the ingredients are listed or exempt.

#### US - TSCA

All the ingredients are listed or exempt.

#### US - TSCA 12(b) Export Notification

None of the ingredients are listed or exempt.

#### Australia - AICS

All the ingredients are listed or exempt.

#### Japan - MITI

None of the ingredients are listed or exempt.

#### Korea - KECI

All the ingredients are listed or exempt.

#### China - IECSC

All the ingredients are listed or exempt.

#### Philippines - PICCS

All the ingredients are listed or exempt.

#### New Zealand - NZIOC

None of the ingredients are listed or exempt.

### 16. Other information



**Ultrox S, Ultrox S+, Ultrox S+K, Ultrox Z+**

<b>Revision date</b>	6/17/2016
<b>Revision</b>	9
<b>Supersedes date</b>	3/23/2016
<b>Hazard statements in full</b>	H350 May cause cancer. H372 Causes damage to organs through prolonged or repeated exposure. H372 Causes damage to organs (Respiratory system, lungs) through prolonged or repeated exposure if inhaled.

This 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. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.