SAFETY DATA SHEET

PRODUCT NAME: ORANGE STAIN

1 – IDENTIFICATION OF MATERIAL AND SUPPLIER

SUPPLIER: The Pottery Supply House
ADDRESS: 1120 Speers Rd. Oakville, ON L6L 2X4
TELEPHONE: 1-800-465-8544
FACSIMILIE: 905-849-0001
EMERGENCY: Not Available
WEB SITE: www.psh.ca
E-MAIL: mail@psh.ca

PRODUCT NAME: Zircon, cadmium selenium orange encapsulated (Cd Sb Zr Si). Inorganic chemical materials smelted at high temperatures.

PRODUCT NUMBER: ORANGE STAIN US018
CAS NO: 99749-34-5
USES: CERAMIC GLAZES
ISSUED DATE: Thursday, 5 January 2017

2 – HAZARDS IDENTIFICATION

GHS LABEL ELEMENTS:

HAZARD STATEMENTS: H303: May be harmful if swallowed. H313: May be harmful in contact with skin. H333: May be harmful if inhaled.


SIGNAL WORD: WARNING
PRODUCT NAME: ORANGE STAIN

UN NUMBER: None allocated
PACKING GROUP: None allocated
HAZCHEM CODE: None allocated
DG CODE: None allocated
SUBSIDIARY RISK: None allocated

3 – COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>ENTITY</th>
<th>CAS NO</th>
<th>CLASSIFICATION</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zircon, cadmium selenium orange encapsulated</td>
<td>99749-34-5</td>
<td>N/A</td>
<td>100%</td>
</tr>
</tbody>
</table>

4 – FIRST AID MEASURES

EYE: Flush eyes with large quantities of water for at least 15 minutes. If irritation persists after washing, contact a doctor.

INHALED: Ventilate the premises. The patient is to be removed immediately from the contaminated premises and made to rest in a well ventilated area. Should the patient feel unwell, contact a doctor.

SKIN: Wash off immediately with soap and plenty of water. Remove and wash contaminated clothing before re-use. If symptoms persist, call a doctor.

SWALLOWED: Induce vomiting. Contact a doctor and present the safety-data sheet. A suspension of activated charcoal in water, or liquid paraffin may be administered.

ADVICE TO DOCTOR: Treat symptomatically.

5 – FIRE FIGHTING MEASURES

FLAMMABILITY: Non Flammable.
FIRE & EXPLOSION: No fire or explosion hazard exists.
EXTINGUISHING: Use an extinguishing agent suitable for the surrounding fire.
PROTECTIVE EQUIPMENT: Use respiratory protection.
HAZCHEM CODE: None allocated.

6 – ACCIDENTAL RELEASE MEASURES

SPILLAGE: Use gloves and protective clothing. In the event of particulates aerosols use respiratory protection. Keep away from drains, surface- and ground-water and soil. Limit leakages with earth or sand. If the product has escaped into a water course, into the drainage system, or has contaminated the ground or vegetation, notify the competent authorities. Remove the waste materials with a suitable device (for instance a suction pump) and dispose. After the
product has been recovered, rinse the area and materials involved with water.

7 – STORAGE AND HANDLING

STORAGE: Keep containers tightly closed in a dry, cool and well-ventilated place

HANDLING: Avoid dust formation. Do not breathe vapors/dust. Handle in accordance with good industrial hygiene and safety practice. Use only in area provided with appropriate exhaust ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Avoid contact with skin, eyes and clothing. Wear personal protective equipment. Do not eat, drink, or smoke in areas of use or storage. Do not take internally. Wash thoroughly after handling.

8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE STANDARDS:

<table>
<thead>
<tr>
<th>INGREDIENT</th>
<th>TWA ppm</th>
<th>STEL ppm</th>
<th>ACGIH TLV ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZIRCONIUM COMPOUNDS (as Zr)</td>
<td>-</td>
<td>-</td>
<td>10 tot</td>
</tr>
<tr>
<td>SILICA</td>
<td>-</td>
<td>0.1</td>
<td>0.1 resp</td>
</tr>
<tr>
<td>CADMIUM DUST (as Cd)</td>
<td>-</td>
<td>-</td>
<td>0.01</td>
</tr>
<tr>
<td>SELENIUM COMPOUND (as Se)</td>
<td>-</td>
<td>-</td>
<td>.2</td>
</tr>
</tbody>
</table>

BIOLOGICAL LIMITS: No biological limits allocated.

ENGINEERING CONTROLS: Use in well ventilated area. Where an inhalation risk exists, mechanical extraction ventilation is recommended. Maintain vapor levels below the recommended exposure standard.

PPE

<table>
<thead>
<tr>
<th>Eye / Face</th>
<th>Hands</th>
<th>Body</th>
<th>Respiratory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wear appropriate eye protection / safety glasses.</td>
<td>Impervious gloves.</td>
<td>Wear appropriate clean, protective clothing such as, but not limited to, overalls, smocks, and aprons.</td>
<td>Use a NIOSH approved respirator in case of insufficient ventilation.</td>
</tr>
</tbody>
</table>

WORK/HYGENIC PRACTICES: When products are in use, do not eat, drink, or smoke. Wash hands immediately after use.

9 – PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>APPEARANCE:</th>
<th>Orange powder</th>
</tr>
</thead>
<tbody>
<tr>
<td>ODOUR:</td>
<td>None</td>
</tr>
<tr>
<td>BOILING POINT:</td>
<td>N/A</td>
</tr>
<tr>
<td>MELTING POINT:</td>
<td>&gt;500°C</td>
</tr>
<tr>
<td>VAPOUR PRESSURE:</td>
<td>NOT AVAILABLE</td>
</tr>
<tr>
<td>SPECIFIC GRAVITY:</td>
<td>N/A</td>
</tr>
<tr>
<td>FLASH POINT:</td>
<td>NOT RELEVANT</td>
</tr>
<tr>
<td>FLAMMABILITY LIMITS:</td>
<td>NON FLAMMABLE</td>
</tr>
</tbody>
</table>
SAFETY DATA SHEET

PRODUCT NAME: ORANGE STAIN

SOLUBILITY IN WATER: Insoluble

VISCOSITY: No data

pH: N/A

% VOLATILES: N/A

EVAPORATION RATE: NOT AVAILABLE

UPPER EXPLOSION LIMIT: NOT RELEVANT

LOWER EXPLOSION LIMIT: NOT RELEVANT

10 – STABILITY AND REACTIVITY

REACTIVITY: None known.

CHEMICAL STABILITY: Stable.

CONDITIONS TO AVOID: Fumes from firing in kiln; Mist created from spray application. Avoid contact with incompatible substances.

INCOMPATIBLE MATERIAL: None known.

HAZARDOUS DECOMPOSITION: No decomposition if stored normally. Thermal decomposition can lead to release of irritating gases and vapors. Metal compounds.

HAZARDOUS REACTIONS: None known.

11 – TOXICOLOGICAL INFORMATION

HEALTH HAZARD SUMMARY: Prolonged contact with stain dust can be very irritating to the eyes and/or skin. High dust levels can be irritating to the respiratory tract. Over exposure to dust may cause lung damage. With adequate ventilation, dust control and good personal hygiene, symptoms of over exposure should not occur. Ingestion of large amounts of stain may cause irritation of the gastrointestinal tract, nausea, vomiting and diarrhea. Advise regular medical monitoring of employees by a physician competent in industrial health.

EYE: Contact with eyes may cause irritation.

INHALATION: Dust or fumes from firing irritating to respiratory tract. Fumes may cause lung inflammation.

SKIN: Prolonged skin contact may cause skin irritation.

INGESTION: May irritate digestive tract.

TOXICITY DATA: QUARTZ (SILICA CRYSSTALLINE) (14808-60-7)

LCLo (inhalation) 300 µg/m³/10 years (human)

TCLo (inhalation) 16,000,000 particles/ft³/8 hrs/17.9 years (human fibrosis)

12 – ECOLOGICAL INFORMATION

ENVIRONMENT: No data.
SAFETY DATA SHEET

PRODUCT NAME:  ORANGE STAIN

13 – DISPOSAL CONSIDERATIONS

WASTE DISPOSAL: Contain spillage and scoop or vacuum. Avoid making dust put in appropriate container for disposal. Waste disposal method in accordance with Federal, State and Local Laws.

LEGISLATION: Dispose of in accordance with relevant local legislation.

14 – TRANSPORTATION

NOT CLASSIFIED AS DANGEROUS GOODS BY THE CRITERIA OF THE ADG CODE.

<table>
<thead>
<tr>
<th>UN NUMBER</th>
<th>LAND TRANSPORT (ADG)</th>
<th>SEA TRANSPORT (IMDG/IMO)</th>
<th>AIR TRANSPORT (IATA/ICAO)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROPER SHIPPING NAME</td>
<td>Ceramic Stain</td>
<td>Ceramic Stain</td>
<td>Ceramic Stain</td>
</tr>
<tr>
<td>DG CLASS / DIVISION</td>
<td>None Allocated</td>
<td>None Allocated</td>
<td>None Allocated</td>
</tr>
<tr>
<td>SUBSIDIARY RISKS</td>
<td>None Allocated</td>
<td>None Allocated</td>
<td>None Allocated</td>
</tr>
<tr>
<td>PACKING GROUP</td>
<td>None Allocated</td>
<td>None Allocated</td>
<td>None Allocated</td>
</tr>
<tr>
<td>HAZCHEM CODE</td>
<td>None Allocated</td>
<td>None Allocated</td>
<td>None Allocated</td>
</tr>
</tbody>
</table>

15 – REGULATORY INFORMATION

INVENTORY LISTINGS:

AUSTRALIA: All components are listed on AICS or are exempt.

USA:

***SARA 313
This product contains certain oxides and compounds which are subject to reporting requirements of Superfund Amendment and Reauthorization Act (SARA) of 1986, Section 313 of the Emergency Planning and Community Right to Know Act and of 40 CRF, Part 372.
Silica is listed on IARC, OSHA and NTP carcinogen list.
All ingredients are on TSCA inventory.
California Proposition 65 - Proposition 65: Silica (Quartz) is listed on the carcinogen list.

CANADA: All ingredients are on DSL inventory.

EUROPE: All ingredients are on EC inventory or exempt.

CHEMICAL SAFETY ASSESSMENT:

EU: Warning label required according to the EU guidelines/Dangerous Chemicals Ordinance.

16 – OTHER INFORMATION

ADDITIONAL INFORMATION:

PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:
The recommendation for protective equipment contained within this report is provided as a guide only. Factors such as method of application, working
environment, quantity used, product concentration and the availability of engineering controls should be considered before final selection of personal protective equipment made.

HEALTH EFFECTS FROM EXPOSURE:
It should be noted that the effects from exposure to this product will depend on several factors including: frequency and duration of use; quantity used; effectiveness of control measures; protective equipment used and method of application. Given that it is impractical to prepare a report which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.

ABBREVIATIONS:
- AICS: Australian Inventory of Chemical Substances
- ACGIH: American Conference of Governmental Industrial Hygienists
- CAS #: Chemical Abstracts Service Number
- CNS: Central Nervous System
- EC No.: EC No – European Community Number
- GHS: Globally Harmonized System
- IARC: International Agency for Research on Cancer
- LD50: Lethal Dose, 50% / Median Lethal Dose
- mg/m³: Milligrams per cubic meter
- PEL: Permissible Exposure Limit
- pH: Acidity < 7 – Alkalinity > 7 measure
- ppm: Parts Per Million
- REACH: Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals
- STOT-RE: Specific target organ toxicity (repeated exposure)
- STOT-SE: Specific target organ toxicity (single exposure)
- SUSMP: Standard for the Uniform Scheduling of Medicines and Poisons
- TLV: Threshold Limit Value
- TWA/OEL: Time Weighted Average of Occupational Exposure Limit
- STEL: Short Term Exposure Limit
- TSCA: Toxic Substances Control Act

REVISION HISTORY:

<table>
<thead>
<tr>
<th>Revision</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>Creation</td>
</tr>
</tbody>
</table>

REPORT STATUS:
The report has been by Chrysanthos Color Company Limited – China. The information provided on safety and handling represents the current knowledge at the time of writing. We should be contacted directly for further clarification regarding any aspect of the product if required.

The SDS has been prepared with all due care to include accurate and up-to-date information. We do not however provide any warranty as to accuracy or completeness. As far as lawfully possibly, Chrysanthos Color Company Limited – China accepts no liability for any loss, injury or damage (including consequential loss) which may be suffered or incurred by any person as a consequence of their reliance on the information contained herein.

PREPARED BY:
Tony Crisafi
SAFETY DATA SHEET

PRODUCT NAME: ORANGE STAIN

Chrysanthos Color Company Limited
2nd Floor, Building B1,
No 19 Gaoxinxi Shi Road,
Nanning High Tech Zone, Nanning,
Guangxi 530003, China.
Tel/Fax: +86 (771) 231 0885
Mob: +61 402 830 337
Email: info@chrysanthos.com
Web: www.chrysanthos.com

End of SDS