

# MATERIAL SAFETY DATA SHEET

## SECTION I PREPARATION AND PRODUCT INFORMATION

MANUFACTURER: THE POTTERY SUPPLY HOUSE LTD.  
ADDRESS: 1120 SPEERS ROAD  
OAKVILLE, ONTARIO L6L 2X4

SUPPLIER: THE POTTERY SUPPLY HOUSE LTD. TEL: 1 800 465-8544  
ADDRESS: 1120 SPEERS ROAD 905 827-1129  
OAKVILLE, ONTARIO L6L 3X4 FAX: 905 849-0001

MATERIAL NAME: **CONE 06 ORANGE UNDERGLAZE**  
MATERIAL USE: CERAMIC DECORATING PAINT

## SECTION II HAZARDOUS INGREDIENTS

INGREDIENT	%	C.A.S.#	LD50	LC50
<b>FRIT,*</b>	<b>9.9</b>	<b>65997-18-4</b>	<b>N.A.</b>	<b>N.A.</b>
CONTAINING FUSED OXIDES OF:				
ALUMINUM	0.5 - 1.5	1344-28-1	N.A.	N.A.
CALCIUM	0.5 - 1.5	1305-78-8	N.A.	N.A.
SILICON (AMORPHOUS)	5.0 - 10.0	7631-86-9	N.A.	N.A.
SODIUM	0.5 - 1.5	1313-59-3	N/A	N/A
<b>SILICA, QUARTZ</b>	<b>1.6</b>	<b>14808-60-7</b>	<b>N.A.</b>	<b>N.A.</b>
<b>ZIRCON ENCAPSULATED ORANGE STAIN*</b>	<b>32.7</b>	<b>99749-34-5</b>	<b>N.A.</b>	<b>N.A.</b>
CONTAINING				
QUARTZ (SiO <sub>2</sub> )	-----	14808-60-7	N.A.	N.A.
ZIRCON	-----	14940-68-2	N.A.	N.A.
CADMIUM COMPOUND	~5.0	-----	N.A.	N.A.

\*A FUSED SILICATE COMPOUND CONTAINING REPORTABLE OXIDES. FORMED BY HIGH TEMPERATURE CALCINATION, IT MAY NOT EXHIBIT ANY OF THE PROPERTIES OF THE METAL COMPOUNDS LISTED.

## SECTION III PHYSICAL DATA

PHYSICAL STATE: LIQUID/SOLID SUSPENSION.  
ODOUR / APPEARANCE: OPAQUE, ORANGE FLUID WITH MILD ODOUR.  
ODOUR THRESHOLD: NOT AVAILABLE  
SPECIFIC GRAVITY: APPROXIMATELY 1.70  
VAPOUR PRESSURE: NOT AVAILABLE  
VAPOUR DENSITY: NOT AVAILABLE  
EVAPORATION RATE: NOT AVAILABLE  
BOILING POINT: NOT AVAILABLE  
FREEZING POINT: APPROXIMATELY 0° C (WATER)  
PH: NOT AVAILABLE  
COEFF. WATER/OIL  
DISTRIBUTION: NOT AVAILABLE

## SECTION IV FIRE OR EXPLOSION HAZARD

CONDITIONS OF FLAMMABILITY: NOT FLAMMABLE  
MEANS OF EXTINCTION: NOT APPLICABLE  
FLASHPOINT, METHOD OF DETERMINATION: NOT APPLICABLE  
UPPER FLAMMABLE LIMIT: NOT APPLICABLE  
LOWER FLAMMABLE LIMIT: NOT APPLICABLE  
AUTO-IGNITION TEMPERATURE: NOT APPLICABLE  
HAZARDOUS COMBUSTION PRODUCTS: TOXIC METAL FUMES MAY BE EVOLVED IN A FIRE. VERY SMALL QUANTITIES (<1%,TOTAL) OF CARBON DIOXIDE, CARBON MONOXIDE, HYDROCHLORIC ACID, FORMALDEHYDE, AND NO<sub>x</sub>/SO<sub>x</sub> VAPOURS MAY BE LIBERATED IN A FIRE.

EXPLOSION DATA,  
SENSITIVITY TO MECHANICAL IMPACT: NONE  
SENSITIVITY TO STATIC DISCHARGE: NONE

## SECTION V REACTIVITY DATA

CONDITIONS UNDER WHICH PRODUCT IS CHEMICALLY UNSTABLE  
NAME OF INCOMPATIBLE SUBSTANCES:  
CONDITIONS OF REACTIVITY:  
HAZARDOUS DECOMPOSITION PRODUCTS:

STABLE  
ACIDIC CONDITIONS, ACIDS AND STRONG OXIDIZERS.  
NONE KNOWN  
TOXIC FUMES MAY BE RELEASED DURING FIRING.

## SECTION VI TOXICOLOGICAL PROPERTIES

ROUTE OF ENTRY: SKIN CONTACT: POSSIBLE IRRITANT. REFER TO EFFECTS OF CHRONIC EXPOSURE.  
SKIN ABSORPTION: UNLIKELY  
EYE CONTACT: REFER TO EFFECTS OF ACUTE EXPOSURE.  
INHALATION: IRRITATING TO THE RESPIRATORY TRACT. REFER TO EFFECTS OF ACUTE AND CHRONIC EXPOSURE.  
INGESTION: THIS PRODUCT IS LOW IN ACUTE TOXICITY. THE CADMIUM IN THIS PRODUCT IS ENCAPSULATED WITHIN A PROTECTIVE ZIRCONIUM SILICATE MATRIX.  
EFFECTS OF ACUTE EXPOSURE: CONTACT WITH EYES MAY CAUSE PHYSICAL IRRITATION AND INFLAMMATION. INGESTION OF LARGE AMOUNTS MAY CAUSE GASTROINTESTINAL IRRITATION, NAUSEA, VOMITING AND DIARRHEA. METAL FUMES FROM FIRING MAY CAUSE LUNG INFLAMMATION.  
EFFECTS OF CHRONIC EXPOSURE: PROLONGED OR REPEATED CONTACT MAY CAUSE DRYING AND REDDENING OF THE SKIN. CADMIUM: MAY CAUSE KIDNEY DAMAGE THROUGH INGESTION OR INHALATION. MAY CAUSE LUNG DISEASE THROUGH INHALATION. MAY CAUSE BONE DISEASE IF HIGH LEVELS ARE INGESTED. ZIRCONIUM OXIDE CONTAINS TRACE AMOUNTS OF RADIOACTIVE URANIUM, THORIUM AND RADIUM WHICH CAUSE CANCER. OVEREXPOSURE TO RESPIRABLE CRYSTALLINE SILICA DUST MAY CAUSE:  
1/ SILICOSIS, A FORM OF PROGRESSIVE PULMONARY FIBROSIS.  
2/ SCLERODERMA, AN IMMUNE SYSTEM DISORDER MANIFESTED BY A FIBROSIS OF THE LUNGS, SKIN AND OTHER INTERNAL ORGANS.  
SILICOSIS INCREASES THE RISK OF TUBERCULOSIS.  
RECENT EVIDENCE SUGGESTS AN ASSOCIATION BETWEEN RESPIRABLE EXPOSURE AND A HIGHER INCIDENCE OF KIDNEY LESIONS.  
CRYSTALLINE SILICA INHALED FROM OCCUPATIONAL SOURCES IS CLASSIFIED (IARC) AS CARCINOGENIC TO HUMANS.

### EXPOSURE LIMITS - TIME WEIGHTED

AVERAGE EXPOSURE VALUES (TWAEV): **GLAZE FRIT: NOT ESTABLISHED** AS COMPONENT OXIDES: **CALCIUM** 2.0 mg./m<sup>3</sup>  
**ALUMINUM** 10.0 mg./m<sup>3</sup>  
**FUSED SILICON** 0.1 mg./m<sup>3</sup>  
**SODIUM** N/A  
**ORANGE STAIN: NOT ESTABLISHED** AS COMPONENT OXIDES: **SILICON** 0.1 mg./m<sup>3</sup>  
**CADMIUM** 0.05 mg./m<sup>3</sup>  
**ZIRCONIUM** 5.0 mg./m<sup>3</sup>  
**SELENIUM, AS Se** 0.2 mg./m<sup>3</sup>  
**SILICA: 0.1 mg./m<sup>3</sup>**

IRRITANCY OF PRODUCT: REFER TO ROUTE OF ENTRY  
SENSITIZATION OF PRODUCT: NONE KNOWN  
CARCINOGENICITY OF PRODUCT: REFER TO CHRONIC EFFECTS. CADMIUM COMPOUNDS ARE CARCINOGENIC.  
TERATOGENICITY OF PRODUCT: NO KNOWN EFFECTS  
MUTAGENICITY OF PRODUCT: NO KNOWN EFFECTS  
SYNERGISTIC MATERIALS: NONE KNOWN

## SECTION VII PREVENTATIVE MEASURES

PERSONAL PROTECTIVE EQUIPMENT TO BE USED:	THIS PRODUCT HAS BEEN SPECIFICALLY FORMULATED FOR BRUSH APPLICATION. USERS WHO APPLY BY SPRAYING ARE ADVISED TO WEAR SAFETY GLASSES AND AN APPROPRIATE RESPIRATOR (REFER TO EXPOSURE LIMITS). USERS WHO APPLY BY DIPPING ARE ADVISED TO WEAR RUBBER GLOVES TO PREVENT SKIN IRRITATION.
ENGINEERING CONTROLS TO BE USED:	NONE FOR BRUSH APPLICATION. THE USE OF VENTILATING EQUIPMENT IS RECOMMENDED FOR SPRAY APPLICATION. THIS PRODUCT CONTAINS CELLULOSE GUM (~1%) AND A PRESERVATIVE (<0.1%). ABOVE 227°C, CARBON MONOXIDE, CARBON DIOXIDE AND SMOKE ARE RELEASED AS THE GUM IS BURNT OFF. HYDROCHLORIC ACID, FORMALDEHYDE, SO <sub>x</sub> AND NO <sub>x</sub> VAPOURS MAY BE LIBERATED WHEN THE PRESERVATIVE IS FIRED OUT. AT HIGH TEMPERATURES, METAL FUMES MAY BE LIBERATED. <b>WHEN FIRING, USE A DOWNDRAFT OR OVERHEAD HOOD-TYPE EXHAUST.</b>
PROCEDURES TO BE FOLLOWED IN CASE OF SPILL: WASTE DISPOSAL:	CLEAN UP WITH SPONGE OR SPATULA. CAUTION: SPILLS ARE SLIPPERY. IN ACCORDANCE WITH LOCAL, PROVINCIAL AND FEDERAL LAWS. DO NOT EMPTY INTO WATER COURSES.
HANDLING PROCEDURES:	AVOID GENERATING MIST OR DUST. MAINTAIN GOOD PERSONAL HYGIENE. DO NOT EAT, DRINK OR SMOKE. WASH AFTER USE.
STORAGE REQUIREMENTS: SPECIAL SHIPPING INFORMATION:	DO NOT STORE NEAR FOODSTUFFS. NONE

## SECTION VIII FIRST AID MEASURES

EYE EXPOSURE:	FLUSH THOROUGHLY WITH WATER FOR 15 MINUTES. SEEK MEDICAL ATTENTION IF IRRITATION PERSISTS.
SKIN EXPOSURE:	WASH THOROUGHLY AND APPLY MOISTURIZING HAND CREAM TO DRIED, REDDENED SKIN.
INGESTION:	SEEK MEDICAL ATTENTION.
INHALATION:	REMOVE TO FRESH AIR AND SEEK MEDICAL ATTENTION AS REQUIRED.

## SECTION IX PREPARATION INFORMATION

MSDS PREPARED BY: JON WALLS  
PREPARATION DATE: MAY 22, 2015

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SOME INFORMATION REPORTED IN THIS MSDS REFERS TO CONSTITUENT OXIDES RATHER THAN TO THE COMPOUND OXIDES OF WHICH THEY ARE A PART. CERAMIC STAINS AND GLASS FRITS MAY HAVE MUCH DIFFERENT PROPERTIES THAN THEIR CONSTITUENT OXIDES. FOR MORE INFORMATION ON THE TOXICOLOGY OF CERAMIC OXIDES, SEE TOXICOLOGY: CERAMICS, GLASS AND METALLURGY BY ÉDOUARD BASTARACHE.

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