

MATERIAL SAFETY DATA SHEET

SECTION I PREPARATION AND PRODUCT INFORMATION

MANUFACTURER: THE POTTERY SUPPLY HOUSE LTD.
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OAKVILLE, ONTARIO L6L 2X4

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MATERIAL NAME: **COBALT BLUE UNDERGLAZE**
MATERIAL USE: CERAMIC DECORATING PAINT

SECTION II HAZARDOUS INGREDIENTS

| INGREDIENT | % | C.A.S.# | LD50 | LC50 |
|---|-------------|-------------------|-------------|-------------|
| FRIT,* CONTAINING FUSED OXIDES OF: | 10.6 | 65997-18-4 | N.A. | N.A. |
| 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) | 3.0 - 7.0 | 67762-90-7 | N.A. | N.A. |
| BORON | 0.5 - 1.5 | 1303-86-2 | N.A. | N.A. |
| SILICA, QUARTZ | 10.0 | 14808-60-7 | N.A. | N.A. |
| BLUE STAIN* | 20.0 | 68186-86-7 | N.A. | N.A. |
| CONTAINING OXIDES OF: | | | | |
| SILICON | --- | 14808-60-7 | N.A. | N.A. |
| COBALT | --- | 1396-06-1 | N.A. | N.A. |
| ALUMINUM | --- | 1344-28-1 | 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, BLUE FLUID WITH MILD ODOUR.
ODOUR THRESHOLD: NOT AVAILABLE
SPECIFIC GRAVITY: APPROXIMATELY 1.55
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_x/SO_x 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: STABLE
NAME OF INCOMPATIBLE SUBSTANCES: POWERFUL OXIDIZING AGENTS.
CONDITIONS OF REACTIVITY: NONE KNOWN
HAZARDOUS DECOMPOSITION PRODUCTS: TOXIC FUMES MAY BE RELEASED DURING FIRING.

SECTION VI TOXICOLOGICAL PROPERTIES

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| ROUTE OF ENTRY: SKIN CONTACT: | MAY CAUSE ALLERGIC CONTACT DERMATITIS IF THERE IS PRIOR SENSITIZATION. REFER TO EFFECTS OF ACUTE AND CHRONIC EXPOSURE. |
| SKIN ABSORPTION: | UNLIKELY |
| EYE CONTACT: | MAY CAUSE EYE IRRITATION. 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. |
| EFFECTS OF ACUTE EXPOSURE: | CONTACT WITH EYES MAY CAUSE PHYSICAL IRRITATION AND INFLAMMATION. METAL FUMES FROM FIRING MAY CAUSE LUNG INFLAMMATION. COBALT COMPOUNDS HAVE BEEN SHOWN TO CAUSE DERMATITIS AND SENSITIZATION. |
| EFFECTS OF CHRONIC EXPOSURE: | PROLONGED OR REPEATED CONTACT MAY CAUSE DRYING AND REDDENING OF THE SKIN. EXPOSURE THROUGH INHALATION MAY CAUSE SYMPTOMS OF CHRONIC BRONCHITIS AND ASTHMA. 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

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| AVERAGE EXPOSURE VALUES (TWAEV): | GLAZE FRIT: | NOT ESTABLISHED | AS COMPONENT OXIDES: | CALCIUM | 2.0 mg./m³ |
| | | | | ALUMINUM | 10.0 mg./m³ |
| | | | | FUSED SILICON | 0.1 mg./m³ |
| | | | | BORON | N/A |
| | SILICA: | 0.1 mg./m³ | | | |
| | BLUE STAIN: | NOT ESTABLISHED | AS COMPONENT OXIDES: | SILICON | 0.1 mg./m³ |
| | | | | COBALT (AS METAL) | 0.05 mg./m³ |
| | | | | ALUMINUM | 10.0 mg./m³ |

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| IRRITANCY OF PRODUCT: | REFER TO ROUTE OF ENTRY |
| SENSITIZATION OF PRODUCT: | INHALATION OF SOME COBALT COMPOUNDS MAY CAUSE AN IRRITATION OF RESPIRATORY ORGANS OF SENSITIVE PERSONS LEADING TO OBSTRUCTION OF AIRWAYS. |
| CARCINOGENICITY OF PRODUCT: | REFER TO CHRONIC EFFECTS. COBALT OXIDE IS CLASSIFIED A3, ANIMAL CARCINOGEN. |
| TERATOGENICITY OF PRODUCT: | NO KNOWN EFFECTS |
| MUTAGENICITY OF PRODUCT: | NO KNOWN EFFECTS |
| SYNERGISTIC MATERIALS: | NONE KNOWN |

SECTION VII PREVENTATIVE MEASURES

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| 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 _x AND NO _x VAPOURS MAY BE LIBERATED WHEN THE PRESERVATIVE IS FIRED OUT. AT HIGH TEMPERATURES, METAL FUMES MAY BE LIBERATED. WHEN FIRING, USE A DOWNDRAFT OR OVERHEAD HOOD-TYPE EXHAUST. |
| PROCEDURES TO BE FOLLOWED IN CASE OF SPILL: | CLEAN UP WITH SPONGE OR SPATULA. CAUTION: SPILLS ARE SLIPPERY. |
| WASTE DISPOSAL: | 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: | DO NOT STORE NEAR FOODSTUFFS. |
| SPECIAL SHIPPING INFORMATION: | NONE |

SECTION VIII FIRST AID MEASURES

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| 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: | PROVIDE LOTS OF WATER AND INDUCE VOMITING ONLY IF CONSCIOUS. 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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