

**MATERIAL SAFETY DATA SHEET**

|   |  |   |  |   |
|---|--|---|--|---|
| <b>SECTION 1 - PRODUCT IDENTIFICATION AND USE</b>   |  |   |  |   |
| PRODUCT IDENTIFIER : SPECTRUM LEAD FREE 913 OLD COPPER  |  |   | PRODUCT IDENTIFICATION NUMBER 913                  |   |
| PRODUCT USE : CERAMIC GLAZE   |  |   |  |   |
| MANUFACTURER'S NAME SPECTRUM GLAZES INC.  |  |   | SUPPLIER'S NAME SPECTRUM GLAZES INC.               |   |
| STREET ADDRESS: 273 BOWES RD, UNIT A1   |  |   | STREET ADDRESS: 273 BOWES RD, UNIT A1              |   |
| CITY: CONCORD PROVINCE: ONTARIO   |  |   | CITY: CONCORD PROVINCE: ONTARIO                    |   |
| POSTAL CODE: L4K1H8 EMERGENCY TEL(905) 695-8355   |  |   | POSTAL CODE: L4K1H8 EMERGENCY TEL(905) 695-8355    |   |
| <b>SECTION 2 - HAZARDOUS INGREDIENTS</b>  |  |   |  |   |
| HAZARDOUS INGREDIENTS   | %  | CAS NUMBER                                  | LD50 OF INGREDIENTS<br>(SPECIFY SPECIES AND ROUTE) | LC50 OF INGREDIENT<br>(SPECIFY SPECIES) |
| SiO2  | 25-33                                    | 14808-60-7                                  | ILV 15mg/m3 OSHA/TWA                               |   |
| CaO   | 5-10                                     | 1305-78-8                                   |  |   |
| Na2O  | 2-5                                      | 1313-59-3                                   |  |   |
| Al2O3   | 3-7                                      | 1344-28-1                                   |  |   |
| B2O3  | 4-8                                      | 1303-86-2                                   |  |   |
| ZnO   | 19-23                                    | 1314-13-2                                   |  |   |
| Fe2O3   | .5-1.5                                   | 1309-37-1                                   |  |   |
| MgO   | 1-2                                      | 1309-48-4                                   |  |   |
| ZrO2  | 6-9                                      | 1314-23-4                                   |  |   |
| MnO2  | .25-1                                    | 1313-13-9                                   |  |   |
| CuO   | 1-2                                      | 1317-38-0                                   |  |   |
|   |  |   |  |   |
| <b>SECTION 3 - PHYSICAL DATA</b>  |  |   |  |   |
| PHYSICAL STATE<br>LIQUID  | ODOUR AND APPEARANCE<br>ODOURLESS LIQUID |   |  | ODOUR THRESHOLD (PPM)<br>N.A.           |
| VAPOUR PRESSURE<br>(mm Hg) N.A.   | VAPOUR DENSITY<br>(AIR=1)                | EVAPORATION RATE<br>N.A.                    | BOILING POINT (C)<br>N.A.                          | FREEZING POINT (C)<br>N.A.              |
| pH 6.5-7  | SPECIFIC GRAVITY<br>1.6-2.0              | COEFF. WATER/OIL DIST.<br>N.A.              |  |   |
| <b>SECTION 4 - FIRE AND EXPLOSION DATA</b>  |  |   |  |   |
| FLAMMABILITY YES__ NO X FLAMES UNDER WHICH CONDITIONS : THIS PRODUCT DOES NOT SUPPORT COMBUSTION            |  |   |  |   |
| MEANS OF EXTINCTION NO SPECIAL MEANS REQUIRED   |  |   |  |   |
| FLASHPOINT AND METHOD<br>NONE   |  | UPPER FLAMMABLE LIMIT<br>(% BY VOLUME) N.A. | LOWER FLAMMABLE LIMIT<br>(% BY VOLUME) N.A.        |   |
| AUTOIGNITION TEMP. (C) N.A.   |  | HAZARDOUS COMBUSTION PRODUCTS NONE          |  |   |
| EXPLOSION DATA N.A. SENSITIVITY IMPACT N.A.   |  |   | ACTIVITY TO STATIC DISCHARGE N.A.                  |   |
| <b>SECTION 5 - REACTIVITY DATA</b>  |  |   |  |   |
| CHEMICAL STABILITY<br>YES X NO__ IF NO, UNDER WHICH CONDITIONS  |  |   |  |   |
| INCOMPATIBILITY WITH OTHER SUBSTANCES<br>YES__ NO X IF SO WHICH ONES REACTIVITY                             |  |   |  |   |
| REACTIVITY AND UNDER WHAT CONDITIONS: NO REACTIVITY   |  |   |  |   |
| HAZARDOUS DECOMPOSITION PRODUCT: MATERIAL IS STABLE, NO POLYMERIZATION BUT TOXIC FUMES MAY BE RELEASED WHEN |  |   |  |   |

MATERIAL IS MELTED.

PRODUCT IDENTIFIER SPECTRUM LEAD FREE 913 OLD COPPER

**SECTION 6 - TOXICOLOGICAL PROPERTIES**

ROUTE OF ENTRY

SKIN CONTACT

SKIN ABSORPTION X

EYE CONTACT X

INHALATION

INGESTION X

EFFECTS OF ACUTE EXPOSURE TO PRODUCT: SKIN IRRITATION DUE TO ABRASIVENESS.  
EYE EXPOSURE COULD CAUSE IRRITATION BUT NO TOXIC EFFECTS.

EFFECTS OF CHRONIC EXPOSURE TO PRODUCT: METAL FUMES IN THE VAPOURS FROM FIRING CERAMIC GLAZES MAY CAUSE LUNG INFLAMATION AND DAMAGE TO KIDNEY AND NERVOUS SYSTEM.

EXPOSURE LIMITS

IRRITANCY OF PRODUCT

SENSITIZATION TO PRODUCT

CARCINOGENICITY

TERATOGENCITY

REPRODUCTIVE TOXICITY

MUTAGENICITY

SYNERGISTIC PRODUCTS

**SECTION 7 - PREVENTIVE MEASURES**

PERSONAL PROTECTIVE EQUIPMENT:

GLOVES (SPECIFY)  
WORK GLOVES

RESPIRATOR (SPECIFY)  
APPROVED DUST MASK

EYE (SPECIFY)  
SAFETY GLASSES

FOOTWEAR (SPECIFY)

CLOTHING (SPECIFY)

OTHER (SPECIFY)

ENGINEERING CONTROLS (SPECIFY, EG. VENTILATION, ENCLOSED PROCESS)  
VENTILATION SHOULD BE USED WHEN SPRAYING GLAZES.

LEAK AND SPILL PROCEDURE: SCOOP INTO SUITABLE RECEPTACLE. DO NOT WASH DOWN DRAIN.

WASTE DISPOSAL: SEND TO APPROVED SITE IN ACCORDANCE WITH REGULATIONS.

HANDLING PROCEDURES AND EQUIPMENT: NO SPECIAL EQUIPEMENT NEEDED. FOLLOW STANDARD PLANT HYGIENE PROCEDURE.

STORAGE REQUIREMENTS: STORE IN DRY AREAS.

SPECIAL SHIPPING INFORMATION: PROTECT AGAINST PHYSICAL DAMAGE. **DOT** LABEL NON-REGULATED

**SECTION 8 - FIRST AID MEASURES**

SPECIFIC MEASURES: GLAZE CONTAINS THE OXIDES LISTED IN THE CHEMICAL FORMULA IN FORM OF CERAMIC FRIT. SOME OF THESE OXIDES ARE ON THE INGREDIENT DISCLOSURE LIST, ONCE THESE OXIDES ARE FUSED AND CONVERTED INTO FRIT THEY ARE NO LONGER AVAILABLE IN TOXIC FORM EVEN THOUGH TESTING WOULD DETECT THE PRESENCE OF THESE OXIDES. (FRIT IS ESSENTIALLY AN INSOLUBLE SUBSTANCE). THE OXIDES ARE PRESENT IN THE FORM OF A SINTERED CERAMIC STAIN OF LOW SOLUBILITY. THESE INGREDIENTS ARE PRESENT IN A STABLE AQUEOUS SUSPENSION.

**SECTION 9 - PREPARATION DATE OF MSDS**

PREPARED BY (GROUP, DEPARTMENT, ETC.)  
TECHNICAL DEPT.

PHONE NUMBER:  
(905) 695-8355

DATE  
15 OCTOBER 2015