

MATERIAL SAFETY DATA SHEET

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| SECTION 1 - PRODUCT IDENTIFICATION AND USE | | |
| PRODUCT IDENTIFIER : SPECTRUM LEAD FREE GLAZE 1209 BLACK | | PRO |
| PRODUCT USE : CERAMIC GLAZE | | |
| MANUFACTURER'S NAME SPECTRUM GLAZES INC. | | SUP |
| STREET ADDRESS 40 HANLAN RD UNIT 33 | | STR |
| CITY WOODBRIDGE PROVINCE ONTARIO | | CIT |
| POSTAL CODE L4L 3P6 EMERGENCY TEL.NO.(905)851-8310 | | POS |

| SECTION 2 - HAZARDOUS INGREDIENTS | | | | |
|-----------------------------------|-------|------------|---|--------------------------------------|
| HAZARDOUS INGREDIENTS | % | CAS NUMBER | LD50 OF INGREDIENTS (SPECIFY SPECIES AND ROUTE) | LC50 OF INGREDIENT (SPECIFY SPECIES) |
| SiO2 | 30-35 | | ILV 15mg/m3 OSHA/TWA | |
| K2O | 1-2 | | | |
| CaO | 10-13 | 1305-78-8 | | |
| Na2O | 2-4 | | | |
| Al2O3 | 8-10 | 1344-28-1 | | |
| BaO | 1-3 | | | |
| Cr2O3 | .5-1 | | .5 | |
| CoO | .2-.5 | 7440-48-4 | .1 | |
| MnO2 | 1-2 | 7439-96-5 | 5.0 | |
| Fe2O3 | 1-2 | | 5.0 | |

| SECTION 3 - PHYSICAL DATA | | |
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| PHYSICAL STATE LIQUID | ODOUR AND APPEARANCE ODOURLESS LIQUID | ODOUR THRESHOLD (PPM) N.A. |
| VAPOUR PRESSURE (mm Hg) N.A. | VAPOUR DENSITY (AIR=1) | EVAPORATION RATE N.A. |
| pH 6.5-7 | SPECIFIC GRAVITY 1.6-2.0 | COEFF. WATER/OIL DIST. N.A. |

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| SECTION 4 - FIRE AND EXPLOSION DATA | |
| FLAMMABILITY YES__ NO X FLAMES UNDER WHICH CONDITIONS : THIS PRODUCT DOES NOT SUPPORT MEANS OF EXTINCTION NO SPECIAL MEANS REQUIRED | |
| FLASHPOINT AND METHOD NONE | UPPER FLAMMABLE LIMIT (% 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. |

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| SECTION 5 - REACTIVITY DATA |
| CHEMICAL STABILITY YES X NO__ IF NO, UNDER WHICH CONDITIONS |
| INCOMPATIBILITY WITH OTHER SUBSTANCES 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. |

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| PRODUCT IDENTIFIER SPECTRUM LEAD FREE 1209 | | | |
| SECTION 6 - TOXICOLOGICAL PROPERTIES | | | |
| ROUTE OF ENTRY SKIN CONTACT SKIN | | | |
| EFFECTS OF ACUTE EXPOSURE TO PRODUCT: SKIN IRRITATION DUE TO ABRASIVENESS | | | |
| EFFECTS OF CHRONIC EXPOSURE TO PRODUCT: METAL FUMES IN THE VAPOURS FROM FILING | | | |
| EXPOSURE LIMITS | IRRITANCY OF PRODUCT | SENSITIZATION TO PRODUCT | CARCINOGENICITY |
| TERATOGENICITY | REPRODUCTIVE TOXICITY | MUTAGENICITY | SYNERGISTIC PRODUCTS |

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| SECTION 7 - PREVENTIVE MEASURES | | |
| PERSONAL PROTECTIVE EQUIPMENT: | | |
| GLOVES (SPECIFY) WORK GLOVES | | RES |
| FOOTWEAR (SPECIFY) | | CLO |
| 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 | | |

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| 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 FOR | |
| M 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. | |
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| SECTION 9 - PREPARATION DATE OF MSDS | | |
| PREPARED BY (GROUP, DEPARTMENT, ETC.) TECHNICAL DEPT. | PHONE NUMBER: (905) 851-8310 | DATE |