MATERIAL SAFETY DATA SHEET

SECTION 1 - PRODUCT IDENTIFICATION AND USE

PRODUCT IDENTIFIER : SPECTRUM LEAD FREE GLAZE 1153 TEXTURE COBALT	PRODUCT IDENTIFICATION NUMBER 1153

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

SECTION 2 - HAZARDOUS INGREDIENTS

HAZARDOUS INGREDIENTS	%	CAS NUMBER	LD50 OF INGREDIENTS (SPECIFY SPECIES AND ROUTE)	LC50 OF INGREDIENT (SPECIFY SPECIES)
SiO2	30-40	14808-60-7	ILV 15mg/m3 OSHA/TWA	
K2O	1-3	12136-45-7		
CaO	5-6	1305-78-8		
Na2O	1-3	1313-59-3		
Al203	5-7	1344-28-1		
B2O3	3-4	1303-86-2		
SrO2	3-4	1314-18-7		
TiO2	2-4	13463-67-7		
CERAMIC STAIN - BLUE	1-2	1345-16-0		
V2O5	1-3	1314-62-1	.5	

SECTION 3 - PHYSICAL DATA

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.	BOILING POINT(C) N.A.	FREEZING POINT(C) N.A.
pH 6.5-7	SPECIFIC GRAVITY 1.6-2.0	COEFF. WATER/OIL DIST. N.A.		

SECTION 4 - FIRE AND EXPLOSION DATA

FLAMMABILITY YES__ NO X FLAMES UNDER WHICH CONDITIONS : THIS PRODUCT DOES NOT SUPPORT COMBUSTION

MEANS OF EXTINCTION NO SPECIAL MEANS REQUIRED

FLASHPOINT AND METHOD NONE	UPPER FLAMMABLE LIMIT (% BY VOLUME) N.A.	LOWER 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.	

SECTION 5 - REACTIVITY DATA

CHEMICAL STABILITY
YES X NO__ IF NO, UNDER WHICH CONDITIONS

INCOMPATIBILITY WITH OTHER SUBSTANCES
YES__ NO X IF SO WHICH ONESREACTIVITY

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 1153 TEXTURE COBALT

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 2013