

9726985-RA19336

## MATERIAL SAFETY DATA SHEET

62390

## SECTION 1 - PRODUCT IDENTIFICATION AND USE

PRODUCT IDENTIFIER : SPECTRUM LEAD FREE 902 ICEBERG		PRODUCT IDENTIFICATION NUMBER 902
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

Iceberg

## SECTION 2 - HAZARDOUS INGREDIENTS

HAZARDOUS INGREDIENTS	%	CAS NUMBER	LD50 OF INGREDIENTS (SPECIFY SPECIES AND ROUTE)	LC50 OF INGREDIENT (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		
CuO	.5-1.5	1317-38-0		

## 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 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 902 ICEBERG			
SECTION 6 - TOXICOLOGICAL PROPERTIES			
ROUTE OF ENTRY <div> <div>SKIN CONTACT</div> <div>SKIN ABSORPTION X</div> <div>EYE CONTACT X</div> <div>INHALATION</div> <div>INGESTION X</div> </div>			
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
TERATOGENICITY	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: (416) 747-8310	DATE 1 AUGUST 2012	



# MATERIAL SAFETY DATA SHEET

<b>SECTION 1 - PRODUCT IDENTIFICATION AND USE</b>				
PRODUCT IDENTIFIER : SPECTRUM LEAD FREE 905 WHEATFIELD			PRODUCT IDENTIFICATION NUMBER 905	
PRODUCT USE : CERAMIC GLAZE			<i>Wheat</i>	
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 (SPECIFY SPECIES AND ROUTE)	LC50 OF INGREDIENT (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		
MgO	1-2	1309-48-4		
Fe2O3	1-2	1309-37-1		
ZnO	7-9	1314-13-2		
<b>SECTION 3 - PHYSICAL DATA</b>				
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.		
<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 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.	
<b>SECTION 5 - REACTIVITY DATA</b>				
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.				

PRODUCT IDENTIFIER SPECTRUM LEAD FREE 905 WHEATFIELD			
SECTION 6 - TOXICOLOGICAL PROPERTIES			
ROUTE OF ENTRY <div> <div>SKIN CONTACT</div> <div>SKIN ABSORPTION X</div> <div>EYE CONTACT X</div> <div>INHALATION</div> <div>INGESTION X</div> </div>			
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 INFLAMMATION AND DAMAGE TO KIDNEY AND NERVOUS SYSTEM.			
EXPOSURE LIMITS	IRRITANCY OF PRODUCT	SENSITIZATION TO PRODUCT	CARCINOGENICITY
TERATOGENICITY	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: (416) 747-8310	DATE 1 AUGUST 2012	



# MATERIAL SAFETY DATA SHEET

## SECTION 1 - PRODUCT IDENTIFICATION AND USE

PRODUCT IDENTIFIER : SPECTRUM LEAD FREE 909 CAMEL

PRODUCT IDENTIFICATION NUMBER 909

PRODUCT USE : CERAMIC GLAZE

*Camel*

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	25-33	14808-60-7	ILV 15mg/m3 OSHA/TWA	
CaO	5-10	1305-78-8		
Na2O	5-8	1313-59-3		
Al2O3	3-7	1344-28-1		
B2O3	4-8	1303-86-2		
ZnO	3-5	1314-13-2		
Fe2O3	1-3	1309-37-1		

## 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 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 909 CAMEL			
SECTION 6 - TOXICOLOGICAL PROPERTIES			
ROUTE OF ENTRY <div> <div>SKIN CONTACT</div> <div>SKIN ABSORPTION X</div> <div>EYE CONTACT X</div> <div>INHALATION</div> <div>INGESTION X</div> </div>			
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 INFLAMMATION AND DAMAGE TO KIDNEY AND NERVOUS SYSTEM.			
EXPOSURE LIMITS	IRRITANCY OF PRODUCT	SENSITIZATION TO PRODUCT	CARCINOGENICITY
TERATOGENICITY	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: (416) 747-8310	DATE 1 AUGUST 2012	



# MATERIAL SAFETY DATA SHEET

## SECTION 1 - PRODUCT IDENTIFICATION AND USE

PRODUCT IDENTIFIER : SPECTRUM LEAD FREE 910 DESERT		PRODUCT IDENTIFICATION NUMBER 910
PRODUCT USE : CERAMIC GLAZE		<i>Desert</i>
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	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	10-13	1314-13-2		
Fe2O3	.5-1.5	1309-37-1		
MgO	1-2	1309-48-4		
ZrO2	4-6	1314-23-4		

## 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 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 910 DESERT			
SECTION 6 - TOXICOLOGICAL PROPERTIES			
ROUTE OF ENTRY <div style="display: flex; justify-content: space-between;"> <span>SKIN CONTACT</span> <span>SKIN ABSORPTION X</span> <span>EYE CONTACT X</span> <span>INHALATION</span> <span>INGESTION X</span> </div>			
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 INFLAMMATION AND DAMAGE TO KIDNEY AND NERVOUS SYSTEM.			
EXPOSURE LIMITS	IRRITANCY OF PRODUCT	SENSITIZATION TO PRODUCT	CARCINOGENICITY
TERATOGENICITY	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: (416)747-8310	DATE 1 AUGUST 2012	



# MATERIAL SAFETY DATA SHEET

<b>SECTION 1 - PRODUCT IDENTIFICATION AND USE</b>				
PRODUCT IDENTIFIER : SPECTRUM LEAD FREE 911 STAR DUST			PRODUCT IDENTIFICATION NUMBER 911	
PRODUCT USE : CERAMIC GLAZE			<i>Stardust</i>	
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 (SPECIFY SPECIES AND ROUTE)	LC50 OF INGREDIENT (SPECIFY SPECIES)
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Al2O3	3-7	1344-28-1		
B2O3	4-8	1303-86-2		
ZnO	10-13	1314-13-2		
Fe2O3	.5-1.5	1309-37-1		
MgO	1-2	1309-48-4		
ZrO2	4-6	1314-23-4		
CERAMIC STAIN - BLUE	.02-.05	68186-87-8		
<b>SECTION 3 - PHYSICAL DATA</b>				
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.		
<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 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.	
<b>SECTION 5 - REACTIVITY DATA</b>				
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.				

PRODUCT IDENTIFIER SPECTRUM LEAD FREE 911 STAR DUST			
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 INFLAMMATION AND DAMAGE TO KIDNEY AND NERVOUS SYSTEM.			
EXPOSURE LIMITS	IRRITANCY OF PRODUCT	SENSITIZATION TO PRODUCT	CARCINOGENICITY
TERATOGENICITY	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: (416)747-8310	DATE 1 AUGUST 2012	



# MATERIAL SAFETY DATA SHEET

## SECTION 1 - PRODUCT IDENTIFICATION AND USE

PRODUCT IDENTIFIER : SPECTRUM LEAD FREE 913 OLD COPPER		PRODUCT IDENTIFICATION NUMBER 913
PRODUCT USE : CERAMIC GLAZE		<i>Old Copper</i>
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	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		

## 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 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 <div> <div>SKIN CONTACT</div> <div>SKIN ABSORPTION X</div> <div>EYE CONTACT X</div> <div>INHALATION</div> <div>INGESTION X</div> </div>			
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