

FEATURES AND BENEFITS

NEPHTON, ONTARIO

SPECTRUM[®] ceramic fluxes are produced from nepheline syenite; a naturally occurring, silica deficient sodium-potassium alumina silicate. The higher total alumina and alkali contribution available from nepheline syenite produces ceramic ware with greater impact and flexural strength and improved resistance to the stresses of thermal extremes and mechanical shock.

The lower melting eutectic and increased fluxing power of SPECTRUM[®] make possible body compositions which mature at temperatures as low as cone 3-5. It is the higher alkali to alumina ratio and greater chemical reactivity that accelerate the melt and promote a faster maturation. SPECTRUM will increase the rate of vitrification over a wider firing range, ensure smooth glazed surfaces even at lower temperatures and help to reduce the deformation typically encountered in fast fire cycling. When the objective is improved translucency, SPECTRUM will combine with and consume the available free crystalline silica to create highly translucent wares.

All SPECTRUM[®] grades are processed and sized under rigid SPC and Unimin QIPSM statistical and quality assurance programs. The result is consistent chemistries for a thorough reaction with all other components, lower iron oxides for better whiteness upon firing, and uniform particle distributions for predictable results.

PARTICLE SIZE ANALYSIS AND PROPERTIES

Mean Values. These Do Not Represent A Specification.

	Mesh ASTM E-11	Microns	A-200	A-270	A-400	A-700	A-1000
Typical Mean %	100	160μ	---	---	---	---	---
Retained on	140	106μ	.03	.01	---	---	---
Individual Sieves	200	75μ	.17	.09	---	---	---
	270	55μ	1.90	.60	---	---	---
	325	45μ	2.50	1.00	.02	---	---
	-325	-45μ	95.40	98.30	99.98	100.00	100.00
Sub Sieve		16μ	54	67	87	98	99
Analysis (% Finer)		10μ	36	48	66	92	98
		5μ	20	26	38	65	87

Free Silica Content	<0.1%	X-Ray Diffraction
Melting Point	1868/1020 °F/°C	ASTM C-24
pH Value	10.1	AFS 113-87-S
Refractive Index	1.53	ASTM D-801
Bulk Density, aerated	38-55 lb/ft ³	ASTM C-29
Specific Gravity	2.61 g/cm ³	ASTM C-128

CHEMICAL ANALYSIS

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Mean Percent by Weight

Silicon Dioxide (SiO ₂)	60.20
Aluminum Oxide (Al ₂ O ₃)	23.60
Iron Oxide (Fe ₂ O ₃)	.08
Calcium Oxide (CaO)	.35
Magnesium Oxide (MgO)	.02
Sodium Oxide (Na ₂ O)	10.50
Potassium Oxide (K ₂ O)	4.80
Loss on Ignition (L.O.I.)	.42

These Oxides exist in a complex of Albite, Microcline, and Nepheline. There is no free crystalline silica present.

ORDERING INFORMATION

Shipping Point:	NEPHTON/BLUE MOUNTAIN, ONTARIO ORIGINATING CARRIER: CANADIAN PACIFIC (CP RAIL)
Availability:	50 LB. BAGS, BULK BAGS AND BULK TRUCK AND RAIL



FOR PRODUCT INFORMATION AND CUSTOMER SERVICE:
 U.S. and CANADA 800-243-9004 • FAX 800-243-9005
 WORLDWIDE 203-966-1306 • FAX 203-972-1378

Silica Sands • Ground Silica • Feldspar • Ball Clay • Kaolin • Nepheline Syenite • High Purity Quartz • Olivine • Microcrystalline Silica • Bentonite Clay • Dolomite

GRADE NUMBERS INDICATE RELATIVE VALUES OR RESULTS. THEY ARE NOT A SPECIFICATION OR WARRANTY OF PERFORMANCE.

HEALTH HAZARD WARNING: Prolonged inhalation of dust associated with the materials described in this data sheet can cause delayed lung injury. Avoid creating dust when handling, using or storing. Follow OSHA Safety and Health Standards for fugitive dust. Current Material Safety Data Sheet containing safety information is available and should be consulted before usage.

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Nepheline Syenite Containing

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