

FEATURES & BENEFITS

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 Covia 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.

PARTICAL SIZE ANALYSIS

Typical Mean Values. These Do Not Represent A Specification.

	Mesh Size		Unground For Body Compositions				
	ASTM E-11	Microns	A-30	A-31	A-40	A-100	A-111
Typical mean % retained on individual sieves	30	600	0.1	0.1	-	-	0.1
	40	425	3.6	8.7	0.3	0.7	1.3
	50	300	26.2	33.4	23.0	-	-
	70	212	-	-	-	41.5	23.6
	100	160	50.2	46.3	50.5	23.1	20.5
	140	106	-	-	-	16.8	20.2
	200	75	17.9	9.7	23.3	10.9	18.0
	270	55	2.2	1.9	2.9	5.0	9.8
	325	45	-	-	-	1.1	2.9
	-325	-45	-	-	-	0.9	3.5

PHYSICAL PROPERTIES

Typical Mean Values. These Do Not Represent A Specification.

SPECTRUM® Ceramic Fluxes		
Free Silica Content (%)	<0.1%	X-Ray Diffraction
Melting Point (°F/°C)	1868°F/1020°C	ASTM C-24
pH Value	10.1	AFS 113-87-S
Refractive Index	1.53	ASTM D-801
Bulk Density, loose (lb/ft³)	83-87	ASTM C-29
Specific Gravity (g/cm³)	2.61	ASTM C-128

CHEMICAL ANALYSIS

Typical Mean Values. These Do Not Represent A Specification.

	Typical Mean Percent by Weight				
	A-30	A-31	A-40	A-100	A-111
Silicon Dioxide (SiO ₂)	60.55	59.90	60.10	59.90	60.20
Aluminum Oxide (Al ₂ O ₃)	23.30	23.30	23.60	23.60	23.40
Iron Oxide (Fe ₂ O ₃)	0.09	0.33	0.09	0.09	0.14
Calcium Oxide (CaO)	0.42	0.65	0.42	0.42	0.48
Magnesium Oxide (MgO)	0.02	0.07	0.02	0.02	0.03
Sodium Oxide (Na ₂ O)	10.31	10.22	10.36	10.36	10.27
Potassium Oxide (K ₂ O)	4.90	4.90	5.01	5.07	5.00
Loss on Ignition (LOI)	0.47	0.69	0.50	0.51	0.52

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

SHIPPING/ORDERING INFORMATION

- Shipping Point: Nephton/Blue Mountain, Ontario
- Originating Carrier: Canadian Pacific (CP Rail)
- Availability: Bulk, IBC, 50 lb Paper Bag
Truck and Rail

CUSTOMER SERVICE

US & Canada: 1-800-243-9004

Fax: 1-800-243-9005

Worldwide: 1-203-442-2500

Fax: 1-203-972-1378

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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 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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