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Finally, the pre-melted ladle flux - tough on the inclusions and sulphur, but gentle on your refractory

Preliminary Product Data Sheet

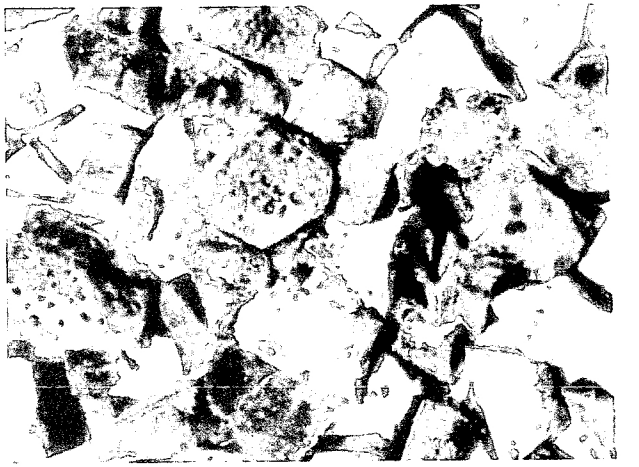
June 2014

Plasma Flux

Our Plasma Flux is a new pre-melted calcium aluminate product engineered to satisfy the most demanding requirements of the modern steel and ladle metallurgical operations.

Designed using the proven FactSage high temperature thermochemical model, Plasma Flux is characterized by:

- Low melting temperature: < 1450° C (2640 ° F) high fluidity for rapid surface protection, high sulphur retention and slag conditioning.
- Free MgO (4-6%) to minimize ladle refractory corrosion.
- Very low TiO_2 (0.1%), Fe_2O_3 (0.5%), SiO_2 (<2.5%), No vanadium, for the most demanding steel products.
- Plasma Flux material does not contain free fluorspar (CaF_2). The small fluoride content (1%) is present as $Ca_{12}Al_{14}F_2O_{32}$ to protect the refractory and maximize the inclusions collection and the slag composition optimization. Plasma Flux meets leaching Environmental USA and Canadian regulations
- Inert, non-dusty and stable material.



Plasma Flux Product characteristics:

Main Constituents (%)

Mayenite: $Ca_{12}Al_{14}O_{33}$ or $12CaO.7Al_2O_3$
AL_2O_3 : 45 - 52, CaO: 44 – 50, MgO: 4 – 6

Specific Gravity: 3g/cm3
Bulk Density: 1,400 – 1,800 kg/m3

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PLASMA FLUX

Typical Chemistry

	Chemistry (%)					
	45.0	45.0	0.0	0.0	0.0	0.0
	49.0	49.0	5.0	2.0	1.0	
Date	CaO	Al2O3	MgO	SiO2	Fe2O3	Na2O
CHECK						
CHECK						
16-Apr-13	49.74	45.90	2.31	1.88	0.09	0.08
17-Apr-13	47.27	48.59	2.31	1.70	0.09	0.04
18-Apr-13	48.20	47.77	2.69	1.23	0.08	0.03
19-Apr-13	48.18	47.76	2.72	1.19	0.11	0.03
21-Apr-13	48.17	46.99	3.08	1.52	0.13	0.10
22-Apr-13	47.98	47.18	3.18	1.51	0.10	0.05
23-Apr-13	46.47	48.54	3.63	1.18	0.11	0.07
24-Apr-13	48.40	46.79	3.52	1.15	0.11	0.03
25-Apr-13	46.70	47.80	3.81	1.48	0.16	0.04
26-Apr-13	50.95	44.48	3.33	1.03	0.17	0.04
27-Apr-13	44.62	50.80	3.58	0.79	0.17	0.04
28-Apr-13	48.56	46.07	4.01	1.18	0.12	0.06
29-Apr-13	46.0	49.1	3.6	1.1	0.2	0.0
AVERAGE 17-29 AVR	47.6	47.7	3.3	1.3	0.13	0.05
STD DEV 17-29 AVR	1.58	1.58	0.51	0.26	0.03	0.02
STD D -26-27 AVR	0.9	0.9	0.6	0.2	0.0	0.0

NOTE: Sulfur typical .045. Generally consistent they do not run.

TEK 6/16