Technical Data Sheet
PREBOND®

PREBOND is a premixed low viscosity natural sodium bentonite and activated sodium bentonite exhibiting variable dry particle size.

Functional use: general purpose is green sand mold additive. Prebond imparts excellent dried and fired strengths to molding sand where high temperature pouring or firing occurs. This is applicable to both the foundry and refractory industries.

Purity: Hydrous silicate of alumina comprised principally of the clay mineral montmorillonite. Montmorillonite content 75% minimum. Contains small portions of feldspar, calcite and quatz.

Chemical Composition (% by weight)

Silica (SiO_2)	51.6-58.4
Alumina (Al_2O_3)	14.0-18.6
Iron Oxide (Fe_2O_3 , FeO)	4.0-8.66
Magnesium (MgO)	3.7-4.64
Sodium & Potassium (Na_2O, K_2O)	1.42-2.46
Lime (CaO)	1.62-2.94

Physical Properties

Particle size (dry) : passing 200 mesh 80% (min)
Moisture content (%) : 14% Max
pH : 8.5-11
Free swell (mls/2g.) : 18 (min)
Methylene blue : 45 ml/0.5g. (min)
Loose Bulk Density : 0.75-0.85g/cm^3
Packaging : kraft paper 50 kg. or 1 ton bag

Foundry Properties

	Moisture (%)	Compact (%)	GCS (N/cm2)	DCS (N/cm2)	Wet Tensile (N/cm2)	Permeability No.	MB. (meq/100 g.)	Free Swell (ml/2 g.)
Average NC*	2.09	40.5	11.63	21.67	0.343	161.67	108	24
Average C*	2.71	40	9.00	18.03	0.160	149.67	95	6

NC = Non Calcine (Fresh Bentonite)
C = Calcine (Fired Bentonite at 600C for 1 hr.)
The foundry properties was tested with sand grain fineness no. 60-65 and 7% bentonite according to AFS standard

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