



THE SIAM REFRACTORY INDUSTRY CO.,LTD.

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Data Sheet

CAST 18 ES

Classification : Extra Strength High-Alumina Castable

Physical Properties :

Maximum Service Temperature	°C	1800
Maximum Grain Size of Aggregates	mm	6.3
Approximate Weight Required for Casting	kg/m ³	2750
Approximate Amount of Water Required for Casting	%	9-11
Bulk Density After Drying at 110 °C	kg/m ³	2800
Modulus of Rupture After Drying at 110 °C	kg/cm ²	170
Modulus of Rupture After Heating at 1000 °C	kg/cm ²	100
Modulus of Rupture After Heating at 1760 °C Max Service Temp.	kg/cm ²	120
Cold Crushing Strength After Drying at 110 °C	kg/cm ²	850
Cold Crushing Strength After Drying at 1000 °C	kg/cm ²	880
Cold Crushing Strength After Drying at 1760 °C Max Service Temp.	kg/cm ²	900
Reheat Test , Permanent Linear Change after Heating 1760 °C	%	-0.50

Chemical Composition :

Alumina (Al ₂ O ₃)	%	94.0
Silica (SiO ₂)	%	0.2
Iron Oxide (Fe ₂ O ₃)	%	0.1
Lime (CaO)	%	5.0

Thermal Expansion :

at 400 °C	%	0.35
at 800 °C	%	0.55
at 1000 °C	%	0.76
at 1200 °C	%	0.96
at 1400 °C	%	1.15

Thermal Conductivity :

at 400 °C	W/m.K	1.87
at 600 °C	W/m.K	1.87
at 800 °C	W/m.K	1.87
at 1000 °C	W/m.K	1.90

The above data are typical values of which the properties of the samples tested according to the internal procedure and standard of Siam Refractory generally accepted by our customers for many years. The above data can not be used for specification or guarantee purpose. Siam Refractory reserves the right to update the above data and change our internal procedure and standard without any prior notice.

Approved by :  Date : May 19, 2010
Quality Assurance Manager