Product Type	**Whytheat A 90% Alumina Dense Castable**	**Whytheat K 60% Alumina Dense Castable**	**Whytheat C 50% Alumina Castable (hs*)**	**Firecrete (super) 70% Alumina Castable**	**Firecrete (spl) 45% Alumina Castable High Strength**
Nature of Bond	Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic
Installation	Vibration Casting	Vibration Casting	Vibration Casting	Vibration Casting	Vibration Casting
GENERAL PROPERTIES					
Raw Material Base	Brown Tabular Alumina	Calcined Diaspore	Calcined Clay	Calcined Bauxite	Calcined Clay
Max. Service Temperature	1750^0 C	1600^0 C	1500^0 C	1450^0 C	1350^0 C
Maximum Grain Size	5 mm	5 mm	5 mm	5 mm	5 mm
Water Required For Casting	7.5 – 8.5%	9.5 – 10.5%	9.5 – 10.5%	10 – 11%	10.5 – 11.5%
Reversible Thermal Expansion	0.80% at 1000^0 C	0.60 at 1000^0 C	0.55% at 1000^0 C	0.65% at 1000^0 C	0.55% at 1000^0 C
CHEMICAL ANALYSIS	TY	TY	TY	TY	TY
Al_2O_3	90.30	60.50 min.	50.50	70.50	46.50 Min.
SiO_2	2.60	32.30	41.30	11.50	34.70
Fe_2O_3	0.75	0.90 max.	1.20	4.20	3.50 max.
TiO_2	1.20	1.40	2.20	7.20	6.60
CaO	4.70	4.30	4.20	6.10	8.00
LOI	0.20	0.30	0.30	0.30	0.40
PHYSCIAL PROPERTIES					
Bulk density, g/cc after drying at 110^0 C/24	2.80	2.22 min.	2.18	2.55	2.22 min.
After drying at 110^0 C/24hrs	640	380 min.	380	400	425 min.
After heating at 800^0 C/3 hrs	430	280	280	300	300
After heating at 1100^0 C/3 hrs	330	230	220	250	225
After heating at 1350^0 C/3 hrs					350
After heating at 1450^0 C/3 hrs				500	
After heating at 1500^0 C/3 hrs				-	-

After heating at 1550^0 C/3 hrs	650	520	500		
MOR, kg/cm2					
After drying at 110^0 C/24hrs	95	65	65	65	60
After heating at 800^0 C/3 hrs	60	30	30	35	30
After heating at 1100^0 C/3 hrs	45	27	27	30	25
After heating at 1350^0 C/3 hrs					75
After heating at 1400^0 C/3 hrs				85	
After heating at 1500^0 C/3 hrs				-	-
After heating at 1550^0 C/3 hrs	110	90	85		
% Retained on max. size	2	2 max.	2	1	2 max.
THERMAL PROPERTIES					
Refractories, Orton / ^{0}C	+37	32/1717 min.	31/1683	32/1717	16/1491 min.
PLC, %					
After heating at 800^0 C/3 hrs	-0.06	-0.12	-0.06	-0.06	-0.12
After heating at 1100^0 C/3 hrs	-0.12	-0.19	-0.12	-0.18	-0.15
After heating at 1350^0 C/3 hrs					-0.50
After heating at 1400^0 C/3 hrs				-0.80	
After heating at 1500^0 C/3 hrs					
After heating at 1550^0 C/3 hrs	-0.80	-1.20 max.	-0.85		
THERMAL CONDUCTIVITY					
Kcal/m hr^0 C					
At 400^0 C HF	1.15	0.81	0.75	0.93	0.75
At 600^0 C HF	1.20	0.83	0.78	0.95	0.80
At 800^0 C HF	1.26	0.86	0.81	0.98	0.86
Packaging	50 kg bags	50 kg bags	50 kg bags	50 kg bags	50 kg bags
Storage life	9 months	9 months	9 months	9 months	9 months
Delivery state	dry	dry	dry	dry	dry

TECHNICAL SPECIFICATIONS

Accmon 60 60% Alumina LC Castable	Accmon 60 S 60% Alumina LC Castable (Low PLC)	Accmon 80 80% Alumina LC Castable	Accmon 80 Spl. 80% Alumina LC Castable	Insulyte 7 Low Density Insulating Castable	Insulyte 11 Medium Density Insulating Castable	Insulyte 11 Li Medium Density Insulating Castable
Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic
Vibration Casting	Vibration Casting	Vibration Casting	Vibration Casting	Tamping	Tamping	Tamping
1600^0 C	1600^0 C	1700^0 C	1650^0 C	1100^0 C	1300^0 C	1350^0 C
6 mm	6 mm	6 mm	6 mm	6 mm	6 mm	6 mm
5.5-6.2%	5.5-6.2%	4.5-5.2%	5.0 – 5.5%	60.0 to 65.0%	29 – 34%	30 – 35%
Typical Value	Typical Value	Typical Value	Typical Value	Typical Value	Typical Value	Typical Value
59.5	59.5	79.50	79.92	-	-	-
1.35	0.90	2.05	2.21	7.45	3.35	1.60
2.50	1.90	2.65	2.63	-	-	-
2.52	2.58	2.85	2.82	0.84	1.28	1.28
725	720	750	643	15.4	40	53
880	880	990	86	8.3	30	35
			-		50	
1015	1030	1220				
			1170		-	
1.0	1.0	-	-	1.20	1.40	1.40
+ 36 / 1804	+ 36 / 1804	+37 / 1820	+37 / 1820	12/1337	14/1398	+14/1398
-0.12	-0.15	-0.25	-	-0.80	-0.19	-0.15
					+0.80	+0.75
-0.70	-0.50					
		+1.40	+1.64			
-	-	-	-	0.18	0.325	0.345
1.20	-	1.80	-	0.32	0.35	
50 kg bags	50 kg bags	50 kg bags	50 kg bags	50 kg bags	25 kg bags	50 kg bags
3 months	3 months	3 months	3 months	9 months	9 months	9 months
dry	dry	dry	dry	dry	dry	dry

Application Procedure for Castables

Installing Conventional Castables

Batching and Mixing

Batching by fractions of a bag is not recommended. A whole bag or multiples should be u; for each batch.

Mixing should be done in a concrete mixer using clean cold water. The mixing time should be less than 1 to 2 minutes for load up to 250 kg and should be 2 minutes for larger batch In case hand mixing of the castable:

- Spread on a non-absorptive platform (concrete or metallic) one or two bags the castable.
- Make a crater of the castabte after thorough dry-mixing by hand shove.
- Pour the recommended dose of water all at one time and allow half minute for absorption.
- Mix the castable and water within two to three minutes after addition of water.

Formwork and Anchors

The wet mixed castable should be placed within 15 minutes. The shuttering of formwork should be rigid, wateright and designed for the pressures induced by wet mix. Whenever castables are to be placed as roofing material or as spann material between supports or as short cantilevers, suitable anchors should be seecure firmly to the supporting frame or shell. Metallic (stainless steel Y or V type), or ceramic based ancoring devices are recommended. The cover of the castable over the tip of anchors should be at least 40 to 50 mm. Anchors must be coated with a 2 to 3mm the layer of beeswax, paper or bitemen in advance of placement. Advice of SKG refractories enginner may be sought in the matter of providing anchors, their spacing etc.

JOINTS

Thermal expansion of dense castables are in the range of 4 to 6 millionths per°C. Expans joints are provided using a thin piece of plywood or cardboard at desired distances. Th bum out during the first heating and will provide the necessary opening.