

Data sheet

Albond HS

ENGLISH

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Description

A bauxite based, coarse grained, low cement castable specifically developed for aluminium contact applications. Albond HS has an enhanced strength profile with improved abrasion and thermal shock resistance and provides excellent resistance to corundum growth.

Features

- Provide 2 to 3 times greater strengths than standard monolithics with similar densities
- Superb resistances to abrasion or mechanical impact
- Excellent thermal shock resistance
- Excellent resistance to molten metal
- Excellent resistance to corundum formation
- Stronger bond formed when heated
- Porosity rivals that of dense firebrick

Installation method

Casting.

Datasheet

Prepared using EN BSI and ISO standard Methods.

Storage

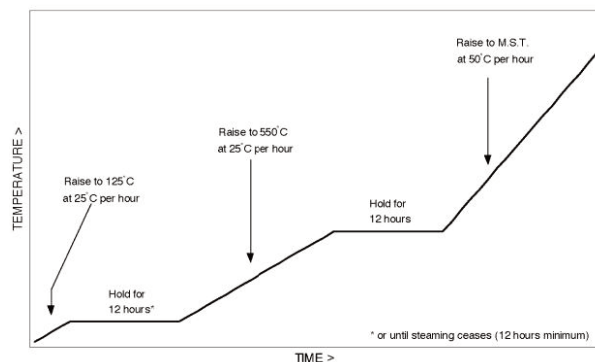
Store bagged monolithics in a dry place, off the ground and, when possible, with the original shrink wrapping intact.

Precautions

This must be installed under closely controlled conditions using mechanical mixers and vibration.

The resultant concrete has a dense, low permeability structure and care must be exercised during initial heating.

At top water material can be placed at minimum or no vibration.



Typical applications

- Suitable in molten aluminium contact for melting and holding furnaces.

Instructions for Use

Highest strength is obtained with castable refractory by using the least amount of clean mixing water that will allow thorough working of material into place by vibrating.

A mechanical mixer is required for proper placement (paddle type mortar mixers are best suited). After adding the recommended water mix for at least 4 minutes, place the material within 20 minutes after mixing.

For maximum strength cure 24 hours in a damp condition before initial heat-up. New castable installation must be heated slowly the first time.



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CHARACTERISTICS	
Bond Type	Hydraulic
Raw Material Base	Bauxite
Maximum Grain Size (mm)	8
Maximum Service Temperature (°C)	1400
Bulk Density Dried to 110°C (kg/m ³)	2920
Net Material Required (kg/m ³)	2890

PHYSICAL PROPERTIES		
Test Temperature (°C)	Cold Crushing Strength (N/mm ²)	Permanent Linear Change (%)
110	140-160	
815	150-160	-0.2
1000	160-200	-0.25
1400	150-200	0.7

TYPICAL CHEMICAL ANALYSIS (%)	
Al ₂ O ₃	81
SiO ₂	11.5
Fe ₂ O ₃	1.2
TiO ₂	2.5
CaO	2.8
MgO	0.1
Na ₂ O + K ₂ O	0.2

MODULUS OF RUPTURE (N/mm ²)	
110°C	N/A
815°C	N/A
ABRASION RESISTANCE ASTM C704 (cm ³)	
815°C	<6
PALLET SIZE	
kg	1200

THERMAL CONDUCTIVITY		
W/mK		
@ mean temp	200°C	
	400°C	
	600°C	2.3
	800°C	
	1000°C	
	1200°C	

WATER ADDITION	
% by weight	4.7-5.2
Volume per Bag (l)	1.175-1.3
Bag Weight (kg)	25

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The values given herein are typical average values obtained in accordance with accepted test methods and are subject to normal manufacturing variations.

They are supplied as a technical service and are subject to change without notice.

Therefore the data contained herein should not be used for specification purposes.

Check with your Thermal Ceramics office to obtain current information or a Compliance Data Sheet where guaranteed property specifications are required.

Before using these materials, it is strongly recommended that the installer consults Thermal Ceramics manual "storage and installation manual" copies of which are obtainable from Thermal Ceramics offices or distributors.

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