Grindwell Norton Limited - HPR, Halol Plant

Section	LAB	**Rev.No :**	00
Document Name	Product specifications	**Rev. Date:**	26/09/2014
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Document No	HPRG/LAB/MS/0506	Mohan **Prepared By**	Bismit **Approved By**

Refrax-20

Description: Refrax-20 is a Nitride Bonded Silicon Carbide Refractory.
It has exceptionally high strength combined with greater resistance to thermal shock. Exceptional resistance to abrasion, oxidation and chemical attack associated to a high thermal conductivity suits ARC/ copper and Blast Furnace application.

1. **Objective:** This document applies for the process to testing of Refrax 20 Products.
2. **Scope:** This document details the procedures for the testing of Refrax 20.
3. **Responsibility:** The responsibility of testing of Refrax 20 with Lab in charge.
4. **Material required**: Sample of Refrax 20 after Firing.

Quality control

A set of properties is measured after firing ("fired properties").

Fired properties:

- Density
- Porosity
- CCS

Chemical Properties

- SiC
- Si_3N_4
- Fe_2O_3

II Physical Properties:

1. Bulk Density : 2.63 g/cc Min.
2. Apparent Porosity : 18 % Max.
3. Cold Crushing Strength : 1400 kg/cm^2 Min.
4. Cold Modulus of Rupture (At room temperature) : 350 kg/cm^2 Min.
5. Hot Modulus of Rupture (At 1350^{o}C) : 400 kg/cm^2 Min.
6. Thermal Conductivity (At 1000^{o}C) : 14 W/mK Typ.
7. Co-Efficient of Thermal Expansion : 4.6 X 10^{-6}/^{o}C Typ.

III. Typical Chemical Properties:

1. Silicon Carbide : 75 %
2. Nitrogen : 6.2 %

IV. Storage: Store in a Dry place

V. Shelf Life: Not Applicable.