

Laboratory Central Laboratory, TRL Krosaki Refractories Limited, Belpahar,
Jharsuguda (Dist.), Odisha

Accreditation Standard ISO/IEC 17025: 2005

Certificate Number TC-7199

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Validity 26.04.2018 to 25.04.2020

Last Amended on --

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
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CHEMICAL TESTING

I.	BUILDING MATERIALS			
A.	Refractory Products			
1.	Alumina-Silica refractory	Al ₂ O ₃	IS 12107 (Part 3): 1987	20 % to 99 %
		SiO ₂	IS 12107 (Part 2): 1987	0.3 % to 80 %
		Fe ₂ O ₃	IS 12107 (Part 6): 1987	0.3 % to 4.5 %
		CaO	IS 12107 (Part 8): 1987	0.28 % to 10 %
		MgO	IS 12107 (Part 8): 1987	0.5 % to 15.0 %
		TiO ₂	IS 12107 (Part 5): 1987	0.25 % to 4.0 %
		Na ₂ O	IS 12107 (Part 9): 1987	0.1 % to 3.0 %
		K ₂ O	IS 12107 (Part 9): 1987	0.2 % to 3.0 %
		LOI	IS 12107 (Part 1): 1987	0.1 % to 15.0 %
2.	Silica refractory products	Al ₂ O ₃	ASTM C 575-81	0.3 % to 2.5 %
		SiO ₂	ASTM C 575-81	92 % to 99 %
		Fe ₂ O ₃	ASTM C 575-81	0.3 % to 3.0 %
		CaO	ASTM C 575-81	0.5 % to 3.0 %
		Na ₂ O	ASTM C 575-81	0.01 % to 0.6 %
		K ₂ O	ASTM C 575-81	0.01 % to 0.6 %
		LOI	ASTM C 575-81	0.1 % to 0.5 %
3.	Basic refractory products (Magnesia, Dunite, Dolomite, Spinel)	MgO	IS 1760 (Part 3): 2001	40 % to 99 %
		SiO ₂	IS 1760 (Part 2): 2001	0.5 % to 40 %
		Fe ₂ O ₃	IS 1760 (Part 3): 2001	0.3 % to 10 %
		CaO	IS 1760 (Part 3): 2001	0.5 % to 60 %
		LOI	IS 1760 (Part 1): 2001	0.1 % to 48 %
		Al ₂ O ₃	IS 1760 (Part 3): 2001	0.2 % to 30 %
4.	Basic refractory products (Magnesia-Chrome, Chrome-Magnesia)	MgO	IS 1760 (Part 3): 2001	10 % to 65 %
		Cr ₂ O ₃	IS 12667 (Part 3): 1989	5 % to 60 %
		SiO ₂	IS 12667 (Part 1): 1989	0.5 % to 10 %
		Fe ₂ O ₃	IS 12667 (Part 2): 1989	5 % to 30 %
		CaO	IS 1760 (Part 3): 2001	0.5 % to 2.5 %
		LOI	IS 1760 (Part 1): 1991	0.2 % to 5 %

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MECHANICAL TESTING

I.	BUILDING MATERIALS			
1.	Refractory Products	Apparent Porosity	IS 1528 (Part 15): 2007 (RA 2017)	0.2 % to 30 %
		Bulk Density	ISO 5017:1998	0.5 g/cc to 4.5g/cc
		Bulk Density	IS 1528 (Part 12): 2007 (RA 2017) ISO 5016:1997	0.5 g/cc to 4.5g/cc
		Cold Compression Strength	IS 1528 (Part 4): 2012 (RA 2017)	20 N/mm ² to 245 N/mm ²
		Hot Modulus of Rapture from 200 °C to 1500 °C	IS 1528 (Part 20) ISO 5013:1985	10 N/mm ² to 58 N/mm ²
			ASTM C583:2015	10 N/mm ² to 58 N/mm ²

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