

## KUAN-HO REFRACTORIES INDUSTRY CORPORATION

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## THE QUALITY OF REFRACTORIES FOR RH DE-GASSER FURNACE

Mostly, molten steel absorbs some impurities such as oxygen  $(O_2)$ , hydrogen  $(H_2)$ , moisture and carbon from air and raw materials from which the molten steel becomes flaking and brittle.Impurities in steel can be removed by a degassing installation in which the molten steel is exposed to vacuum or evacuated low pressure environment. The

damage of refractories of degassing unit is more serious at the leg and snorkel. We have developed the following refractories for RH-Degassing steel making. Especially, our direct-bonded magnesia-chrome bricks are used in China Steel Corporation (Taiwan) with satisfactory performance.

**Typical Properties** 

Kind		Direct Bonded							
Brand Properties		RH-1	RH-1F	RH-2	RH-2S	RH-2C	RH-2D		
Bulk Density(g/cm <sup>3</sup> )		3.20	3.25	3.20	3.20	3.15	3.20		
Chemical Composition (%)	MgO Cr <sub>2</sub> O <sub>3</sub>	60.0 20.0	61.2 25.7	58.0 25.3	60.1 24.5	60.0 24.0	58.0 25.3		
Cold Crushing Strength(Mpa)		55.0	47.1	42.8	50.0	38.7	50.4		
Apparent Porosity(%)		15.5	16.3	16.7	16.5	17.3	16.9		
Hot modulus rupture (Mpa) at 1400°C		6.9	7.8	5.8	6.0	5.0	5.1		
Application		Lower part Snorkel	Low part Snorkel	Middle part Low Part Snorkel	Middle part Low Part Snorkel	Upper part Middle Part	Upper part Middle Part Alloy Chute		
Characteristic		Spalling resistance Slag resistance	Slag resistance High hot strength	Spalling resistance Slag resistance	Spalling resistance Slag resistance		High strength		
Remark		Super high temperature fired at 1850°C							

Kind		Semi rebonded							
Brand		SBD-1	SBD-1H	SBD-1HS	SBD-2	SBD-2H	SBD-2HS		
Properties									
Bulk Density(g/cm <sup>3</sup> )		3.25	3.30	3.30	3.20	3.25	3.25		
Chemical Composition	MgO	57.7	56.0	59.7	61.2	59.4	62.0		
(%)	$Cr_2O_3$	27.6	28.7	26.7	23.1	24.0	22.2		
Cold Crushing Strength(Mpa)		78.5	75.5	84.7	64.2	65.0	55.2		
Apparent Porosity(%)		15.1	15.5	13.5	15.8	14.5	15.9		
Hot modulus rupture (Mpa) at 1400°C		9.5	10.6	12.1	8.9	9.1	9.4		
Application		Low Part	Low Part	Low Part	Low Part	Low Part	Low Part		
		High hot strength Slag resistance	Slag resistance	Slag resistance High hot strength	Spalling resistance	High hot strength	High hot strength		
- C - C				rature fired at 1850°C with fused magnesia-chrome clinker					