



SAINT-GOBAIN PERFORMANCE CERAMICS & REFRACTORIES

# THE MAGMALOX<sup>®</sup> SOLUTION

REHEATING FURNACE HEARTHS



SCAN ME

TO DOWNLOAD



# THE RANGE OF MAGMALOX® PRODUCTS

## BENEFITS



Significantly Increased  
Furnace Life



Superior Surface Quality  
of Reheated Products



Reduced  
Maintenance Costs



## RN

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- Alumina-zirconia-silica fusion cast refractory
- Weak adherence of slag
- Easily cleaned, hot or cold

## DR

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- Alumina-zirconia-silica fusion cast refractory
- Homogeneous structure
- Resistance to thermal shock

## 550

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- Alumina-zirconia-silica fusion cast refractory
- High wear resistance
- Weak adherence of slag
- Easily cleaned, hot or cold

## 555

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- High alumina fusion cast refractory
- High wear resistance
- High temperature resistance

## REHEATING FURNACE HEARTHS

Saint-Gobain Ceramics and SEPR offer steelmakers a comprehensive range of products for reheating furnaces. Magmalox® products are used in both pusher and walking-hearth furnaces. This range is based on over 60 years' experience in minimizing costs and soak-zone repairs while raising productivity. Magmalox® products help steelmakers to optimize the behavior of each area of the furnace, to balance wear and to substantially increase campaign life.

### Benefits include:

- Record tonnage of reheated slab or billet per campaign
- Improved surface quality of reheated products
- Easy to install, rapid heat-up, no (or very light) intermediate repairs, hence reduced downtime

## OTHER APPLICATIONS

Magmalox® products are recommended for a range of furnace applications calling for outstanding resistance to erosion and corrosion, including:

- Waste incinerators: Stoker upper walls
- Steelworks: Crash deck for sinter plants

## PRINCIPAL CHARACTERISTICS

### Typical Chemical Analysis (%)

	RN	DR	550	555
Al <sub>2</sub> O <sub>3</sub>	73	73	73	95
SiO <sub>2</sub>	19	19	6	0.5
ZrO <sub>2</sub>	5.5	5.5	20.5	-
Na <sub>2</sub> O	1.05	1.05	0.5	4.1
Fe <sub>2</sub> O <sub>3</sub>	0.7	0.7	<0.3	<1
CaO	0.5	0.5	<0.3	<1
TiO <sub>2</sub>	0.25	0.25	<0.3	<1

### Typical crystallographic analysis (%)

	RN	DR	550	555
Corundum	39	39	71	45
Mullite	41	41	-	-
Zirconium Oxide	5	5	20	
B Alumina	-	-	-	53
Vitreous Phase	15	15	9	2

### Typical Physical Properties

	Units	Temperature	RN	DR	550	555
Density in Block Form	g/cm <sup>3</sup>	-	3	2.9	3.55	3.17
Expansion	%	1150°C	0.8	0.8	0.9	0.95
Thermal Conductivity	W/m.K	1250°C	4.6	3.1	9.2	6.5
Hot Crushing Strength	MPa	1350°C	45	-	120	156

### Characteristics

	Hot Erosion / Abrasion Resistance	Slag Build Up Resistance	Thermal Variation Resistance
RN	+	++	+
DR	-	++	++
550	++	++	+
555	++	-	+
Other Alumina Based Fused Cast Refractories	++	--	-
Other Alumina-Zirconia-Silica Fused Cast Refractories	-	+	-

# OUR GLOBAL PRESENCE



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