

## INTRODUCTION

The CMR series ramming mass has excellent anti-erosion, anti-corrosion, thermal shock resistance and other characteristics while formulated depending on the following features of your particular smelting conditions.

- The specific steel category, grades and alloy composition analysis of customers' target products;
- The specific smelting furnaces dimensions and the application positions;
- The specific smelting shift features at site.etc.

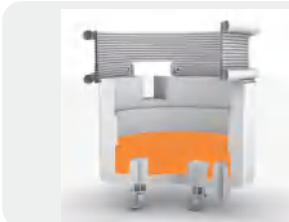


## COMPOSITION&PROPERTY

Part number	Chemical Composition(wt%)						Bonding agent	Max. enduring temp.(°C)	Construction Density(10 <sup>3</sup> kgs/m <sup>3</sup> )	Grain size(mm)	HCS(MPa)		Linear change rate / %		Applicable Steel grade
	MgO	CaO	Fe <sub>2</sub> O <sub>3</sub>	SiO <sub>2</sub>	Al <sub>2</sub> O <sub>3</sub>	I.L					1200°C@3h	1600°C@3h	1200°C@3h	1600°C@3h	
CMR M83 E	≥83	6~7	5~6	<1.2	<0.6	<0.5	Chemical	1800	≥2.5	6~0	>13	>45	+0.2	-2.0	C,LA,MA,HA
CMR M85 E	≥85	6~8	5.5~6.5	<1.2	<0.6	<0.5	Chemical	1850	≥2.5	6~0	>12	>45	+0.3	-2.0	C,LA,MA,HA
CMR M87 E	≥87	7~8	4~5	<1.0	<0.4	<0.5	Chemical	1900	≥2.6	6~0	>10	>40	+0.3	-1.8	C,LA,MA,HA
CMR M89 E	≥89	7~8	3.8~4.5	<1.0	<0.3	<0.5	Chemical	1950	≥2.8	6~0	14	>50	+0.4	-1.8	C,LA,MA,HA
CMR M86 E	≥90	4~6	2~4	<1.0	<0.2	<0.5	Chemical	1950	≥2.8	6~0	14	>50	+0.4	-1.8	C,LA,MA,HA

Note:  
 The parameters and composition above in the sheet are only for customer's reference, please contact our engineer for specific with submission of your detailed steel-making process features and steel category. Particular production information will be issued by Consteel with composition and monolithics processing illustration for your project.  
 C- unalloyed plain carbon steel categories including the low carbon, medium carbon and high carbon steel;  
 LA- alloy steel with low alloy components lower than 5% as Si, Si-Mn, etc  
 MA- alloy steel with medium alloy composition from 5% to 10% as Cr-Mo, Cr-Mo-V and Ni;  
 HA- alloy steel with high alloy content above 10% as Ni, Cr-Ni and Mn composition ;

## HOW TO SELECT THE RIGHT ONE



The unshaped refractory mix is special art involves around experience and science, which means the more cases we have and the deeper analysis we make will guarantee the more odds we can provide you with satisfactory formulation and granularity to meet your steel mills requirement. In order to enable our engineer to configure with the state of art design to fuel your optimal steel-making, please fill out the questionnaire correspondingly. And this is so-called "tailored design" for our clients.

