

## MG 5R-1 \* MG 5R-2



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### 6% Magnesium-Ferrosilicon Alloys With Rare Earths For Ductile Iron Nodulizing

	<b>MG 5R-1</b>	<b>MG 5R-2</b>
<b>Chemical Analysis:</b> Silicon	43 - 48%	43 - 48%
Magnesium, total	5.5 - 6.5 %	5.5 - 6.5 %
Calcium	1.5 - 2.0 %	1.5 - 2.0 %
Aluminium	1.2% max.	1.2% max.
Rare Earths (total)	0.50 - 0.80%	0.80 - 1.10%
<b>Sizing Mesh Tyler:</b>	Down x 9M	Other sizes may be inquired
	9M x ¼"	
	9M x 1 ¼"	

MG 5R-1-2 provide a number of distinct advantages in the nodulization of ductile iron parts. These include higher quality castings through improvement of graphite nodularity for a given quantity of Magnesium added, a reduction in the amount of alloy needed for effective nodulizing; lesser amounts of carbides in the parts casted in the thin section. Higher levels of ferrite and thus lower hardness for a given composition and thickness, and greater tolerance to higher levels of carbide and pearlite promoting residual elements.

The alloy MG 5R-1-2 improves exceptionally the nodulization . Although the Cerium and Rare Earths content are low, both together in the same addition results in a great residual of Mg and Rare Earths. The choice of Rare Earths levels gives foundry men flexibility in determining , which Rare Earths content best fits their individual needs.

Rare Earths, provide nodulizing effect and therefore helps Magnesium gets better yields. When Rare Earths reach such values, it may be based in what explained above; reduces the quantities of the nodulization alloy from 10-20%.

Our alloy MG 5R-1-2, is in ingoted in thin layers in ingot molds covered to avoid segregation problem during alloy solidification. When crushed don't generate a high level of undesirable fines.

Nowadays, concerning regarding contamination for undesirable elements are increasing. Our MG 5R-1-2 are produced in submerged arc furnaces, where charcoal and iron ore are used respectively, as reductor agent and source of Fe elements. Therefore, the residual levels of undesirable elements are very low. For example, the typical Chromium level is 0.05% with typical Manganese level of 0.025% Alloys prepared with the utilization of steel scraps, could have higher level of those elements.