

## IM 43



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### IM43 is used mainly in nodular Iron as a strong graphitizer

<b>Chemical Analysis:</b>	Silicon	74	-	80%
	Zirconium	1	-	2 %
	Calcium	2.2	-	2.7 %
	Aluminium	1.5%	max.	(green molds)
	Aluminium	1.5	-	2.5%(metallic molds)

#### Sizing Mesh Tyler :

**100M X 28M**  
**28M X 6M**  
**6M X 4M**

IM 43 has been used for many years in Europe for castings with very narrow properties range. The above chemical elements are well controlled as to obtain a constant inoculating effect. Silicon in the above analysis is a great graphitizer and ferritizer. It is also useful for increasing Silicon into the base iron and its recovery equals to 100% at temperature above 1475°C (2690°F). Calcium is a strong deoxidizing agent, therefore, increases the eutectic cell number. To prevent slagging ( it is maintained at the level of 2,5%).

At the level of 1,5%, Zirconium shows great affinity with impurities contained in base iron melted.

Therefore, Zirconium performs as binder for the uncombined Oxygen in the metal, thus neutralizing it, as well as Nitrogen and Sulphur. Being a strong reducing agent, Aluminium is held at 1,5% when metal is being cast in green molds, and at 1,5 to 2,5% when it is being poured into metallic molds, as in the case of centrifugal pipes manufacturing.

Used amount can range from 0,2 – 0,8%, but normal addition is at about 0,5%, always depending on equivalent Carbon in gray iron.

In the case of nodular iron, it is well known that Magnesium increases the overcooling.

IM 43 eliminates the negative effects of this occurrence. Therefore, it is mainly used in nodular iron and the quantity can vary from 0,3% up to 1%.

Nowadays , concerning regarding contamination for undesirable elements are increasing. Our IM43 is produced in submerged arc furnaces, where charcoal and iron ore are used respectively, as reductor agent and source of Fe elements. Therefore, the residuals levels of undesirable elements are very low.