

ULTRACORE[®] BRAND MAGNESIUM FERROSILICON CORED WIRE

The Cored Wire injection technique has been used for many years in the steel industry, and has been introduced successfully in cast iron production plants. In general, this technique allows the operator to add alloy elements and reactive materials to a liquid metal in the proper place, making the additions highly efficient. At the same time the precise way in which the required quantity is added significantly improves the results over bulk addition processes. The advantages offered by this method for magnesium addition into molten cast iron for nodular iron production can be summarized as follows:

1.- Allows treatment of a wide range of sulfur content base metal. The treatment takes only one operation in base iron ranging from 0.010-0.10 % S. This avoids desulfurization pretreatments like CaC₂ treatment and the disposal of the resulting reactive slags.

2.- Better control of additions, lowering the standard deviation of the target content values.

3.- Better environmental conditions, since the treatment is conducted in an isolated station under controlled fume extraction conditions.

4.- Lower standard deviation in Mg residual values. This is an important factor since it allows lowering the target Mg.

5.- Easy handling and simplicity of treatment. No weighing of the added material requires, fewer personnel.

6.- Lower temperature during treatment and less slag, which means energy savings and longer life for furnace refractory linings.

7.- Close control of the treatments and materials used. A detailed report is available with detailed treatment information.

8.- Easy computerized control of the operation.

CHEMICAL COMPOSITION:

A variety of chemical analyses are available to meet the particular needs of each foundry. Some commonly used powder compositions are shown below:

| Element/Grade | Composition 1 | Composition 2 | Composition 3 | Composition 4 |
|----------------------|----------------------|----------------------|----------------------|----------------------|
| Si (%) | 41.0-47.0 | 44.0-52.0 | 46.0-52.0 | 34.0-36.0 |
| Mg (%) | 29.0-31.0 | 29.0-31.0 | 27.0-29.0 | 23.0-25.0 |
| RE (%) | 1.0-2.0 | 1.0-2.0 | 0.0 | 5.0-7.0 |
| Ca (%) | 2.0-3.0 | 3.0-4.0 | 4.0-6.0 | < 1.5 |
| Al (%) | 0.3-0.5 | 0.5-1.0 | 0.5-1.0 | 0.5-1.0 |
| C (%) | 2.4-3.0 | < 1.0 | < 1.0 | < 1.0 |

(*) The Ce content in a RE is about 50%.

Globe Metales, S.A. is well known for producing tailor-made chemistries upon request.

SIZING:

Cored Wire is available in a variety of diameters and lengths. Both vertical and horizontal axis orientations are available to suit customer's feeding system.

Typical Free Coil dimensions for 13 mm diameter are shown below:

| Diameter | Length | Internal Diameter | External Diameter | Width |
|------------------------|---------------|--------------------------|--------------------------|--------------|
| 13 mm | 4900 m | 500 mm | 1140 mm | 750 mm |
| Diameter | Length | Internal Diameter | External Diameter | Width |
| 0.51 in (13 mm) | 16,100 ft | 19.7 in | 45.3 in | 29.5 in |

PACKAGING:

For protection from moisture and damage during transportation and storage, coils are encased in steel basket, placed on wooden pallets and shrink wrapped in plastic film. Ten coils can be shipped in a 20 ft sea container. Other packing options are available upon request.

QUALITY:

Magnesium Ferrosilicon Cored Wire is produced under Quality Controlled conditions in our San Luis Manufacturing Plant, certified to ISO9000/2000

MATERIAL SAFETY DATA SHEET:

Available to Globe customers. Please ask your sales representative.

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