

SI-EXTRA[®] INOCULANT

The grades of this inoculant are as follows:

Si-extra[®] B, Si-extra[®] S, Si-extra[®] Z and Si-extra[®] Z-S

These highly efficient graphitizing inoculants are used for the production of grey irons with high and medium content of sulfur.

Such chemically active components as **Ba, Zr, Sr** and **RE** in small concentrations in combination with high-concentration silicon (up to 80%) produce a powerful graphitizing effect when the inoculants of these grades are added to the melt during the period of its precrystallization even in small quantities.

Treatment of irons with these inoculants makes it possible to solve the following objectives:

- prevent appearance of chilling defects in thin-walled castings when cooling occurs at high speeds
- promote uniform distribution of type A graphite in the structure of the melt
- neutralize the harmful influence of nitrogen that leads to the formation of gas- and shrinkage-related porosity defects
- enhance the mechanical properties of cast iron

Si-extra[®] inoculants are used successfully to treat irons utilized for manufacturing by chill casting piston rings for internal combustion engines and fittings for high-voltage electric networks.

Standard sizes of inoculant particles:

- 0.5-3 mm for inoculants introduced into the molten metal as it enters a ladle
- 3-10 mm for inoculants placed at the bottom of a ladle
- 0.2-0.8 mm for inoculants introduced into the molten metal as it enters a mold
- Cored wires

In the case when molten metal is poured into a ladle, 0.5-2 kg of inoculants is consumed per 1 t of iron.

In the case when molten metal is poured into a mold, twice as small an amount of inoculants may be consumed.



Arrange for modifiers to be kept under conditions of proper storage. Modifiers contain chemically active elements, part of which may absorb moisture from the environment.