

Low Carbon SilicoManganese



>PRODUCT DATA SHEET

1. Appearance

Lumpy material with a silvery metallic surface.

2. Advantages of using low carbon silicomanganese

LC SiMn is used in the production of stainless steel in AOD, VOD and CLU processes with the following advantages:

- Use of LC SiMn during slag reduction instead of HC FeMn during decarburization reduces the total treatment time. This reduces the amount of oxidized Mn, and hence the quantity of Si needed in the slag reduction period. At the same time, this reduces lining attack due to less fluid slag (less MnO).
- Computer model calculations at KTH, Sweden, show improvements in productivity of 4% to 6%, depending on steel grade, by changing from the use of HC FeMn to the LC SiMn practice.
- The LC SiMn manganese to phosphorus ratio (%Mn / %P) can be twice to four times higher than standard HC FeMn. Phosphorus input is significantly lowered when using LC SiMn.
- LC SiMn can replace Mn-metal and FeSi in the production of some carbon steel grades.

3. Chemical composition

GRADE	% Mn		% Si		% C	% P	% S
	Spec.	Typical	Spec.	Typical	Max.	Max.	Max.
LC SiMn	59-63	60	26-30	27	0.10	0.10	0.01
ULC SiMn	58-62	59	27-31	28	0.05	0.05	0.01

4. Sizing

- Standard sizing:
 - 20 – 80 mm, maximum 10% undersize
 - 10 – 50 mm, maximum 10% undersize
 - 3 – 25 mm, maximum 5% undersize
- All sizes: maximum 10% oversize.

5. Packing

LC SiMn is usually delivered as bulk. Packing in big bags and other packaging on request.

6. Physical data

- Density : 5.9 – 6.5 g/cm³
- Bulk density : approx. 3 000 kg/m³
- Melting range : 1 075°C – 1 240°C
- Angle of repose : 40° - 60°, dependent on size of material

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