



AZIN KIMIA CO.

Materials for Ceramic & Steel Industry

Steel Industry

Supplying **raw materials**



AZIN KIMIA CO.



SILICO MANGANESE

Silicomanganese adds less phosphorus, carbon, aluminum, and nitrogen to the steel compared to a mixture of standard high carbon ferromanganese (HC FeMn) and ferrosilicon with 75% Si (FeSi75).

Standard quality silicomanganese (**SiMn**) is used in most silicon and manganese-containing steels where the combination of carbon, manganese, silicon, and trace elements fits the final steel analysis in an economical way.

The use of low carbon silicomanganese in stainless steels and alloy steels provides a more economical production route, where a combination of manganese and silicon is required in a low carbon steel product.

HIGH-CARBON SILICOMANGANESE

	GRADE 65/14	GRADE 65/15
Mn	60% Min	65% Min
Si	14% Min	15% Min
C	2.5% Max	2.25% Max
S	0.03% Max	0.03% Max
P	0.35% Max	0.35% Max

Physical Data

Density: approx. 6.1 g/cm³

Bulk density: approx. 3200 kg/m³

Angle of repose: 40° - 60° depending on size of material

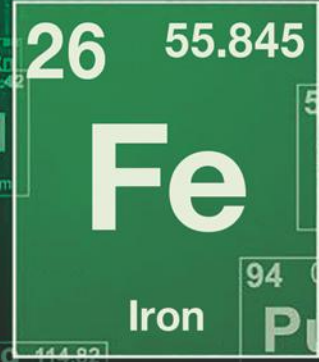
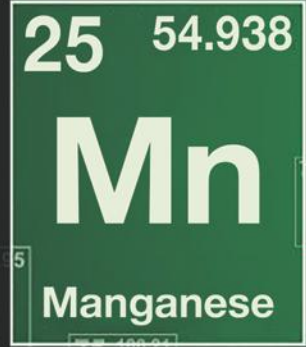
Melting range: 1060°c - 1285°c

Packing

SiMn is usually delivered as a bulk and its packed in **JUMBO BAGS.**

LOW-CARBON SILICOMANGANESE

Mn	55 - 60% Min
Si	25 - 30% Min
C	0.2% Max
S	0.03% Max
P	0.15% Max



FERRO MANGANESE

High-carbon **FeMn** is the traditional form of manganese added to steels, but its application is mostly limited to unalloyed and low-alloyed carbon steels.

Medium and low carbon ferromanganese are used where the carbon content must be controlled and can not be reduced after the addition of the ferroalloy.

These grades are mainly produced by oxygen refining of high carbon ferromanganese and by a silicothermic process involving the reaction between silicon in crude SiMn alloy and manganese ore.

The consumption of refined alloys with reduced carbon content is increasing due to increasing production of low carbon steels.

Mn	75-78% Min
Si	1.5% Max
C	6-8% Max
S	0.03% Max
P	0.3% Max

◀ **HIGH-CARBON
FERROMANGANESE**

Mn	78% Min
Si	1.0% Max
C	1.5% Max
S	negligible
P	0.3% Max
Al	1.0% Max

◀ **MEDIUM-CARBON
FERROMANGANESE**

Mn	78% Min
Si	1.0% Max
C	0.3% Max
S	negligible
P	0.5% Max
Al	0.5% Max

◀ **LOW-CARBON
FERROMANGANESE**

Physical Data

Density: approx. 7.3 g/cm³

Bulk density: approx. 4000 kg/m³

Angle of repose: 40° - 60° depending on size of material

Melting range: 1050°c - 1250°c

Packing

HcFeMn is usually delivered as a bulk and its packed in

JUMBO BAGS.

MANGANESE ORE

Manganese occurs in nature in the form of minerals. More than 300 minerals are said to contain some manganese, but only a small number have high manganese content.

The most common manganese minerals are oxides, carbonates, and, appearing less frequently, silicates and sulfides.

The manganese ores are characterized by their content of manganese, iron, and various impurities. The main types of ores are metallurgical (>%35 Mn; high-grade ores with a manganese content above %48 are within this category), ferruginous (%15 to %35 Mn; high levels of iron), and mangano-ferrous ores (in fact, iron ores with %5 to %10 Mn).

PRODUCT	Mn	GRADE
1st Grade	48-46	6 mm - 75 mm
2nd Grade	42-44	6 mm - 75 mm
3rd Grade	34-36	6 mm - 75 mm
4th Grade	24-26	6 mm - 75 mm
Chilli	30-28	10 mm



جناب آقای مهندس فاضل خرم
 لرزه‌ها پس شرکت آذین گیاره آغاز فعالیت عزیزان من بسیار خوشحال شدم
 امیدوارم شرکت شما فعالیت کند سازمان شمرده در خدمت مردم کشورمان باشد
 خداوند هرگز نتواند از پناه خود مرفوق بدارد و نه ما را در آن شرکت فرصت
 خدمت به کشورمان ایران بدارد شده باشد .
 نندرت مرفوق باشد
 پرویز دوامی
 پرویز دوامی هشتم آذرماه ۱۴۰۰



+98 21 26 35 36 25 +98 21 26 35 36 22 info@azinkimia.com

Until 208, Second floor, Namad elahieh building,
 No. 33, West maryam St. corner, africa Blv.
 (Elahiyeh), Tehran, Iran
 www.azinkimia.com