COMETAL

Your Door to Raw Materials & Markets

Ferro Nickel

26	55.845	28	58.6934
Fe	$^5D_4$ 1,83	Ni	$^3F_4$ 1,91
Iron		Nickel	
7,874	7,9024	8,908	7,6398
1538	2861	1455	2913
(m) 126	BCC	(m) 124	FCC
[Ar] $3d^6\ 4s^2$ +2,3		[Ar] $3d^8\ 4s^2$ +2,3	

Description

Ferro Nickel is a Ferro Alloy that is obtained from the carbothermic reduction of serpentinic minerals, such as Limonite, Serpentine or Garnierite.

Excluding China, the largest producers of Ferro Nickel are Japan, Colombia and New Caledonia. China's case is special because it produces large amounts of a nickel-pig iron and a host of different types of Ferro Nickel, where the nickel content varies from 1.5% to 80%.

Properties

PHYSICAL STATE	Solid
COLOUR	Shiny Metallic
ODOUR	Odourless
MELTING POINT	1500ºC approx.
BOILING POINT	2900ºC approx.
SPECIFIC GRAVITY	3.8g/cm^3

It is a hard Ferro Alloy which is stable under normal storage conditions. It should not be exposed to contact with carbon oxides in reducing atmospheres, due to the risk of forming the toxic gas nickel carbonyl $Ni(CO)_4$. Contact with acids and strong oxidizing agents should also be avoided.

According to the relevant European regulations (CLP regulation), Ferro Nickel is classified as a:

- Skin Sensitizer, Category 1
- Carcinogenic, Category 2
- STOT repeated exposure, Category 1

Ferro Nickel is not classified as a hazardous good for transportation.

Uses

Most of the Ferro Nickel production is used for the manufacturing of austenitic stainless steels, which represents a third of the total contribution of nickel for the manufacturing of such steels. It is also used in the manufacturing of batteries, electronics, gas turbines, etc.

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