TECHNICAL SPECIFICATION

EAST HARBOUR GROUP

Manganese Powder

1. Basic Information

Product Name	Manganese Powder
Structural Formula	Mn
Molecular Formula	Mn
CAS No.	7439-96-5
EINECS	231-105-1

2. Specifications

Characteristics	Specification
Form	Powder
Purity (%)	99.5
Particle Size (Mesh)	300
Elemental Analysis (%)	
Mn	99.68
S	0.020
C	0.010
P	0.0015
Fe	0.0275
Si	0.0035
Se	0.045

3. Additional Information

INTRODUCTION AND APPLICATIONS

Manganese is a chemical element with the symbol Mn and atomic number of 25. It is not found as a free element in nature; it is often found in minerals in combination with iron. Manganese is a transition metal with a multifaceted array of industrial alloy uses.

Manganese is a pinkish grey, chemically active element. It is a hard metal and is very brittle. It is hard to melt but easily oxidized. Manganese metal powders and its common ions are paramagnetic. Manganese tarnishes slowly in air and oxidizes like iron in water containing dissolved oxygen. Manganese is reactive when pure, and as a powder it will burn in oxygen, it reacts with water (it rusts like iron) and dissolves in dilute acids.

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Applications

Alloy Production

• Manganese is essential to iron and steel production. At present steel making, it accounts 85% to 90% of the total demand, most of the total demand.
• Manganese micron powder is a key component of low-cost stainless-steel formulations and widely used in manufacturing of aluminium alloys.
• Used to increase the strength, resistance to corrosion, and resistance to wear in steel and aluminium alloys. Essential for making specialized ferrous alloys and stainless steel.

Glass and Ceramics

• Used to add a violet, brown, or black tint to glass and ceramics.
• Also, manganese micron powder is used to decolorize glass in glassmaking and it gives violet colour to glass.

Battery Materials

• Manganese micron powder is used for manganese-zinc oxide batteries.
• Utilized as an additive or precursor in lithium-ion and alkaline battery cathode materials (e.g., MnO_2).

Chemical Catalysts

• Can operate as a precursor for catalysts based on manganese in oxidation and organic synthesis processes.