



# NAGPUR PYROLUSITE PVT. LTD.



## NAGPUR PYROLUSITE PVT. LTD.

**Head Office:**

Nagpur Pyrolusite Pvt. Limited  
85, Yeshwant Stadium, Dhantoli, Nagpur  
Maharashtra-440012, India  
Ph: +91 712 2424642/ 2437035  
Fax: +91 712 2430258

**Manufacturing Unit:**

Nagpur Pyrolusite Pvt. Limited  
472/2, Amravati Road,  
Mouza-Post: Gondkhedi, Nagpur  
Maharashtra

**Factory Manager:**

+91 8793074264

**Director:**

Sanjay Jainarayan  
Aditya S. Jainarayan  
Email: aditya@nagpurpyrolusite.com  
Mob: +91 9823074264

**E-mail:**

info@nagpurpyrolusite.com  
nppltd@yahoo.com

**Website:**

www.nagpurpyrolusite.com



Designed & produced by [shellsindia.com](http://shellsindia.com) Cell : 9422805595





**NAGPUR  
PYROLUSITE  
PVT. LTD.**



### INDUSTRIES WE SERVE:



Animal Feed / Nutrition



Aromatic Chemicals /  
Ceramic Water Purification



Foundries



Steel



Aluminium



Welding

### OUR FEATURED PRODUCTS:

- Cored Wires
- Ferro Aluminium
- Ferro Silicon Magnesium
- Manganese Oxide (Feed Grade)
- Nickel Magnesium
- Inoculants & Nodulisers
- Manganese Dioxide (Powder / Granules)
- Ferro Titanium
- Aluminum & Nickel Master Alloys

**NAGPUR  
PYROLUSITE  
PVT. LTD.**

AN ISO 2001 - 2008 Certified Company



## NAGPUR PYROLUSITE PVT.LTD.

Enriched by tradition & commitment to quality for over three decades, The Company had a humble beginning as a **Pioneer** for processing of Manganese Dioxide in the year 1983-84. The solid foundation of high ethical standards, an unflinching commitment to customer satisfaction and a strong infrastructural set-up resulted in unprecedented growth and a global reputation for consistent quality and time-bound deliveries. Nagpur Pyrolusite Pvt. Limited has carved out a niche for itself in manufacturing, exporting, marketing and distribution of **Manganese Dioxide, Granulated Manganese Dioxide** used especially for water purification & **Manganese Oxide (Animal Feed / Nutrition)**.

In the Year 2008, the Company ventured into manufacturing of various **Ferro Alloys, Inoculants & Nodulisers, Aluminium De-Oxidisers; Master Alloys & Metal Powders** which has given a new face to its activities and progress. NPPL is a **FAMI-QS** certified Company, which is an exclusive program for the European feed industry. FAMI-QS is a pioneer in its field as it is the only certifiable code specifically aimed at specialty feed ingredients and their mixture for animal nutrition. In the year 2018 the company further expanded by setting up a metallurgical cored wire plant offering treatment solutions to the steel & foundry industry .

NPPL believes in forming strategic partnerships with our customers & suppliers, continuous breakthroughs in process & product development and become a globally networked enterprise through growth with people, employees & customers.

#### CSR:

NPPL understands its responsibility & operates in a manner that protects basic Human Rights, provides opportunities of growth for its employees, protects the environment and makes a positive contribution to the community. We embrace culture of continuous improvement in all aspects of our business.

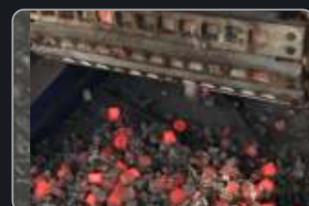


## SPECIALITY FERRO ALLOYS AND DE-OXIDISERS

### FERRO ALUMINIUM:

Aluminium finds its use as one of the most commonly & preferred Deoxidizer in Steel making. Steelmakers have always been skeptical with respect to the efficiency & recovery of Aluminium Ingots or wire additions for both cost and quality reasons.

Hence the introduction of Ferro Aluminium was made to overcome this problem. With density of Ferro Aluminium estimated close to 4-5g/cm<sup>3</sup> as compared to that of liquid steel (7 g/cm<sup>3</sup>), it dissolves & penetrates to the bottom of ladle or furnace thereby giving complete recovery & uniform treatment.



GRADES	AL%	C%	SI%	MN%	S & P%	FE%
FeAl 300	30-35%	0.10%	0.30%	0.30%	0.03%	Balance
FeAl 350	35-40%	0.10%	0.30%	0.30%	0.03%	Balance
FeAl 600	60%	0.15%	0.50%	0.50%	0.03%	Balance

Apart from the above standard grades, Ferro Aluminium can be manufactured as per the required specifications and sizes based on their applications. (25%; 40%; 50%; 55%; 70%)

#### Size:

4x4x3 cm Piglets  
6x6x3 cm Piglets  
9x8x7 cm Piglets

#### Packing:

In 50 kg Double Gunny Bags; or  
Jumbo Bags (1000 kg);  
Steel Drums (As per requirement)

#### Physical Properties:

Appearance	Greyish Silver
Specific Density	4-5g/cm <sup>3</sup>
Melting Point	1200-1300°C

### NICKEL MAGNESIUM:

Nickel Magnesium (NiMg) Alloys are Master Alloys of Magnesium with Nickel, Which facilitates higher transfer of Magnesium into the liquid Cast Iron in comparison with pure magnesium due to metal density variations of liquid Iron & Magnesium Resulting in better Recoveries & Minimising MgO Fume Emissions during treatment.

Additions of NiMg into liquid Iron promote Nodular Graphites in Ductile Iron / SG Iron. It is also used for Deoxidation & Desulfurization of Cast Iron, Special Steels and Super Alloys.

Nickel-Magnesium can also Manufactured along with Cerium Rare Earth Metals which helps to reduce the Effects caused by the Presence of Other Impurities like Titanium, Lead & Others. Rare Earths further Enhances & improves the Nodularising Effect of Magnesium & Prevents the Fading Effect in Castings.

GRADES	NI	MG	RE	FE
Pyro NiMag 50	Balance	4-5%	With or without	1% Max
Pyro NiMag 160	Balance	14-16%	With or without	1% Max
Pyro NiMag 200	Balance	18-20%	With or without	1% Max

(Other grades available & can be manufactured as per specific requirements & applications)

**Packing:** In Steel Drums  
**Size:** Lumps : 10-60 mm or  
5-80 mm (As required)

#### Physical Properties:

Bulk Density	7.8-7.9g/Cm <sup>3</sup>
Melting Point	1300-1320°C

#### Other Nickel Master Alloys & Compositions:

Ferro Nickel Magnesium FeNiMg

Nickel Calcium NiCa (5-6% Calcium; Balance Nickel)

Nickel Aluminium NiAl (50% Al; Balance Nickel)

Nickel Zirconium NiZr (50% Zr; Balance Nickel)

Nickel Titanium NiTi (35% Ti; 50% Ti; Balance Nickel)

Nickel Chromium NiCr (20% Cr; 40% Cr; Balance Nickel)

**Shape:** Lumps | **Size:** As Desired | **Packing:** In Steel Drums

### FERRO TITANIUM FERRO MOLYBDENUM



### ALUMINIUM DE-OXIDISERS (PIGLETS/ SHOTS/ NOTCH BARS)

- Aluminium Piglets Shots & Notch Bars are used in Steel Plants for De Oxidation, Removing Oxidation Skin, Eliminating Surface Defects, Removing Stress, Strengthen, Precision Casting, Automobile Spare, and Pump Valve Industry.
- Specifications:**  
Al: 96% - 97% Min; C: 0.10% Max; Cu: 0.30% Max; Mn:0.30% Max; Mg:0.50% Max; Si: 0.50% Max; Fe:1% Max
- Size:**  
**Aluminium Piglets:** 6x6x3 cm or 3X3X2 cm Piglets  
**Aluminium Shots:** 2mm to 5mm; 3mm to 10mm; Others as per request  
**Aluminium Notch Bars:** 1 kg; 5 kg Bars



## INOCULANTS & NODULISERS:

**Inoculants** are added in Liquid Cast Iron in order to provide the best and consistent characteristics in the final casting. They are used to control matrix structure and avoid casting defects. Inoculants can be found under several grain size distributions to satisfy the location of the Inoculant addition within the foundry process. Those locations of Inoculant addition are known as In-Furnace, In-Ladle, In-Stream or In-Mould. Inoculants are Ferro-Silicon based alloys. All elements which are Aluminum, Barium, Bismuth, Calcium, Carbon, Strontium, Zirconium or Rare Earth can be added in exact amount into the base liquid iron in order to provoke and certify the final casting matrix structure.

**Nodulisers** are alloys with Silicon as main component and traces of Magnesium, Cerium; Calcium with specific relevance. The nodulisation process enables the transformation of lamellar graphite into spheroidal or vermicular one, thus improving mechanical strength, elongation and material resilience.

### PRODUCTS WE MANUFACTURE:

- Ferro Silicon Magnesium
- Ferro Silicon Strontium
- Ferro Silicon Barium
- Ferro Silicon Zirconium
- Ferro Silicon (With or without Rare-Earth)
- Aluminium Ferro Silicon
- Others (As per specific requirements)

## FERRO SILICON MAGNESIUM

Ferro Silicon Magnesium Alloy imparts the correct Graphite Structure required in S.G.Iron thereby improving the Tensile Strength & its elongation properties. We produce Ferro Silicon Magnesium in wide range of specifications & combinations of Magnesium, Calcium & Rare Earth. With bare minimum inclusions of Dross & Oxides, our material reduces Alloy consumption by giving maximum recoveries with reduced fume generations. Stringent control of Chemistry and size is ensured by offering tailored specifications & size requirements for all applications processes such as In-Mould, Tundish or Sandwich.



GRADES	Si%	Mg%	TRE%	CA%	AL%	FE%
PyroMg 460	43-48%	4-6%	0.8-1.2%	0.8-1.2%	0.70%	Balance
PyroMg 570	43-48%	5-7%	1.5-2.0%	1.5-2.0%	0.70%	Balance
PyroMg 680	43-48%	6-8%	0.8-1.2%	0.8-1.2%	0.70%	Balance
PyroMg 810	43-48%	8-10%	0.8-1.2%	1.5-2.0%	0.70%	Balance
PyroMg 820	43-48%	8-10%	1.5-2.0%	0.8-1.2%	0.70%	Balance

(Other grades available & can be manufactured as per specific requirements & applications)

#### Size: 2-10: 5-15: 10-25

Our regular sizes are 1-5 mm, 5-15mm, 5-25mm and tailor made sizes can be produced on demand.

#### Packing:

In Jumbo Bags or 50 kg Gunny Bags

## FERRO SILICON STRONTIUM

Ferro Silicon Strontium Alloy is a very powerful Inoculant suitable for both Grey & Ductile Iron Castings specially in Thin Wall Section Castings & Corners. Low Aluminium & Calcium content ensures minimal slag formation, hence, reducing the risks of developing Pin Holes



GRADES	Si%	Sr%	Ca%	Al%	Fe%
Pyro SR 610	70-75%	0.6-1.0%	0.15%	0.50%	Balance
Pyro SR 120	72-75%	1.0-1.20%	0.15%	0.50%	Balance

#### Size:

0.20mm to 0.70mm; 1.0mm to 3.0mm; 3.0mm to 6.0mm (Other size available)

#### Packing:

In 25 kg Paper Bags or Jumbo Bags

## FERRO SILICON; FERRO SILICON BARIUM & FERRO SILICON ZIRCONIUM:

GRADES	Si%	Al%	Ca%	Ba%	Zr%	Fe%
Ferro Silicon Inoculant	70% Min	1.50%	0.50%	-----	-----	Balance
Ferro Silicon (With Rare Earth)	70% Or 75%	1.0%	0.50%	-----	-----	Balance
Ferro Silicon Barium	68-75%	1.50%	1-2%	2-3%	-----	Balance
Ferro Silicon Zirconium	70%	1.50%	0.50%	-----	2.0-2.5%	Balance

#### Size:

0.2 to 0.7mm; 1 to 4mm; 3 to 6mm; 4 to 10mm

#### Packing:

In Paper Bags or Jumbo Bags



Other Inoculants & Nodulisers can be manufactured as per required specifications and size requirements.



## METALLURGICAL CORED WIRES

With a history of production for Speciality & Treatment Alloys having its application in Special Steel Treatment & Foundry Industry, NPPL has further expanded into manufacturing of Metallurgical Cored Wires for the Steel & Foundry Industry Worldwide. NPPL has a complete background with majority of the major raw material for Cored Wire Production being produced at our own melting facility, thus giving us insights into quality sourcing & technical advantages and catering to individual specific tailored requirements of our customers. Spread over an area of 20,000 square meters, the dedicated plant has a capacity to manufacture more than 1200 mt cored wire monthly for steel & foundry application in its first stage.

### Preview on typical Cored Wires & their purpose of application :

PRODUCT	MATERIAL	DESCRIPTION & APPLICATION
CaSi Cored Wire (CaSi)	Calcium-Silicon (Ferro Silicon Calcium or Calcium Silicide)	Added In Silicon Steel Production For High Calcium Metal Yields In Molten Steel
Solid Calcium (Ca) Cored Wire	Pure Solid Calcium Metal	Added to Silicon Restricted Steel Production For Ultra High Calcium Metal Yields In Molten Steel
CaFe Cored Wire (CaFe)	Calcium & Iron	Added In Low Silicon Steel Production For Modification & High Calcium Yields
CaAlFe Cored Wire	Calcium -Aluminium & Iron	Added to Low Or Restricted Silicon Steel Production for Higher Calcium Yields & Modification
Carbon (C) Cored Wire	Pure Graphite Carbons	Added to Molten Steels For Trimming Proportions
FeMn Cored Wires (LC/ MC Mn)	Low-Medium Carbon Ferro Manganese	Added By Alloy Steels & Foundries for Manganese Yields in Molten Metal
FeTi Cored Wire (FeTi)	Ferro -Titanium	Added to Alloy Steel For Microalloying & Deoxidation
(FeSiMg) Cored Wire	Ferro Silicon Magnesium & Rare Earths	Used By Ductile Iron Foundries for Nodularisation & DeSulphurisation of Castings
(Mg) Cored Wire	Pure Magnesium Metal (Granules)	Used By Ductile Iron Foundries for Nodularisation & DeSulphurisation of Castings
Inoculation Cored Wire	Silicon Based Inoculants with Rare Earths; Strontium; Zirconium	Used By Foundries for Inoculation
Others	Various Other Cored Wires are Produced as Per Requirements: Ferro Boron; Ferro Aluminium; Nitrated Manganese; Lead; Nickel Magnesium; & Others	

Wire Diameter : 9mm; 13mm; 16mm & others



## MANGANESE OXIDE (MNO) FEED GRADE

**A. Feed Grade:** Manganese is an important micronutrient, the deficiency of which disrupts growth and results in disorders of the bones and central nervous system. As the animal body does not produce Manganese, it needs to be supplemented externally. Thus, it forms an important constituent of all Animal and Cattle feed. Different grades of Manganese Oxide are manufactured ranging from 50% Mn to 62 % Mn. It is used in Animal Feed Industry, Fertilizer Industry, and Welding Industry etc. NPPL manufactures Manganese Oxide as per European feed specifications, with heavy metals within specified limits.

### Physical Properties

A. Odour	Odourless
B. Fluidity	Free flowing fine power
C. Color	Greenish Brown
D. Particle Size	100 Mesh 98% passing 200 Mesh 90% passing (or as per order)
E. Specific Gravity	4 to 4.5
F. Toxicity	Non - Hazardous

CAS NO: 1344-43-0 Density: 1.80 - 1.90 Kg/Dm<sup>3</sup>

### Specifications:

Typical Analysis Elements	Grade
Manganese Mn (T)	60 – 62% Min or 62% Max
SiO <sub>2</sub>	7% Max
Fe <sub>2</sub> O <sub>3</sub>	7% Max
Al <sub>2</sub> O <sub>3</sub>	4% Max
Pb (Lead)	100 PPM Max
As (Arsenic)	100 PPM Max
Cd (Cadmium)	10 PPM Max
Hg (Mercury)	NIL
Dioxin	NIL( Not Present in our material)
Shelf life	3 Years
Solubility	Water Insoluble / Acid Soluble
Packing	Packed in HDPE/PP Bags ( 25kgs or 1250 kg Jumbo Bags)
Capacities	NPPL has a production capacity to Manufacture 1000mt / Month of Feed Grade MNO



**Production Capacity**  
1000 Metric Tonnes Per  
Month





**NAGPUR  
PYROLUSITE  
PVT. LTD.**



## MANGANESE DIOXIDE (MNO2)

Different grades of Manganese Dioxide (MNO2) are manufactured ranging from 60% MNO2 to 90% MNO2 in powder as well as granular form. Manganese Dioxide is an essential ingredient for the manufacturing of dry cells, it is also used for decolorizing the greenish tinge in glass, it is used in Ferro-alloys, ceramics, pigments, paints, dyes, organic, inorganic and aromatic chemicals, and also in water treatment plant where this granular MNO2 is used to remove iron from the water.

### Physical Properties

A.	Color	Steel gray to solid black
B.	Odour	Odourless
C.	Fluidity	Free flowing
D.	Luster	Metallic to dull
E.	Crystal system	Tetragonal; 4/m 2/m 2/m
F.	CAS No.	1313-13-9
G.	Molecular Wt.	87
H.	Density	5.026 kg/dm <sup>3</sup>
I.	Solubility	Water Insoluble / Acid Insoluble
J.	Particle Size	As per your requirement (from 85 mesh to 400 mesh)



**Granulated MnO2:**  
Granulated MnO2 is used for purification of water; to save major cost, without affecting the quality it can be used in the place of natural Pyrolox, Filox-R or Manganese Greensand and is available in the following size range:

- 0.25 to 1.0 mm
- 0.35 to 0.85 mm
- 0.5 to 1 mm
- 1 to 2 mm
- 1 to 3 mm
- Other sizes on request

**Production Capacity :**  
1200 Metric tones per month

**Following grades of Manganese Dioxide are available with us in Lump, Powder, Chips & in Granulated form:**

Grades Available		
A.	72-74%	MNO2
B.	75-76%	MNO2
C.	78-79%	MNO2
D.	80-81%	MNO2
E.	82-84%	MNO2
F.	85-86%	MNO2
G.	87-89%	MNO2
H.	89-90%	MNO2

(Detailed analysis can be provided for the Grade required)

## QUALITY CONTROL:

NPPL is an ISO 9001-2008 & FAMIQS certified organization thus ensuring quality control at all stages of production starting from incoming raw materials to in-process material & finished goods. The company through its stringent, quality control measures ensures perfection throughout the manufacturing process so as to eliminate defects at every level of production. NPPL has been working with other Mineral & Metal departments of the country in the areas of exploration and improvement of quality through improved processes, raw material sourcing, research & development and atomization, which has helped us gain sustained competitive advantage.

A well-equipped, state of the art laboratory has been developed on the site with modern equipment's and procedures for detailed testing & evolution of the product at every stage of manufacturing process, thus continuously ensuring quality output. In-House EDXRF Spectro (Pan-Analytical Make) along with AAS Equipment; Carbon & Sulphur Apparatus & other Wet-Chemical Testing Facilities and necessary equipment's helps us analyze samples within minutes during & after production.

## INFRASTRUCTURE AND FACILITIES



EDXRF SPECTRO Panatical Make - EPSILON III



Quality Control with R&D Setup



Laboratry



Infrastructure Mechanisation



Quality Control P.T Test



Packaging Storage



Admin Office