



Quality



Technology



Innovation



Integrity



Teamwork

LUSTROUS CARBON

We are proud to offer Lustrous Carbon Powder which is tailor made to act as an additive for imparting better finish to castings. Lustrous Carbon is a carbon-containing additive which is added to the bentonite -bonded molding sands in order to reduce oxidation, minimize sand adhesion to the casting at shakeout, enhance casting surfaces and combat the occurrence of casting defects. At the same time the optimizing molding sand properties and performance.

Lustrous carbon formers are essentially organic in nature. They contain H – C compounds that volatilize under the effect of the casting temperature. The gaseous atmosphere produced is supersaturated with carbon and exerts a reducing effect, preventing oxidation defects such as Burnt-on sand, Graphite degeneration and other Chemical reactions. C super saturation ultimately becomes so extensive that pyro lytic carbon in the form of lustrous carbon precipitates directly onto the mold surface at elevated temperatures. The degree of super saturation in the mold atmosphere depends on the composition [Z] of the lustrous carbon former (C-H-O ratio), the carbon concentration [K] and the temperature [T] ($LC = f[Z, K, T]$).

The precipitation of lustrous carbon onto the hot mold wall reduces chemical reactions and the degree to which the mold face can be wetted by the molten metal. The gases produced influence the impact of the liquid metal against the mold material providing a so-called “cushioning effect” protecting the casting. The presence of lustrous carbon ensures good casting “peel” with excellent molding sand/casting separation at shakeout with optimum collapsibility and disintegration of the mold minimizing sand losses.

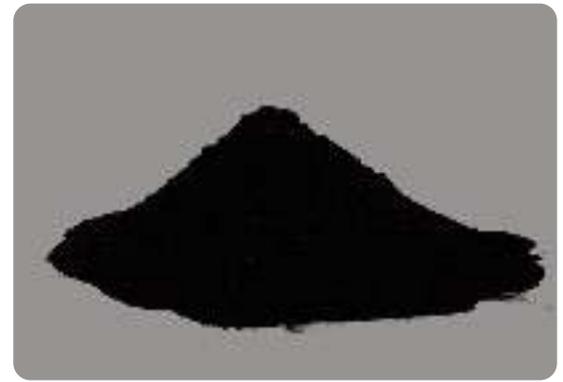
At high temperatures the lustrous carbon former itself becomes plastic and swells minimizing compressive stresses produced inside the mold due to the thermal expansion of silica. Swelling and the formation of carbon residues, help to stabilize moisture. Classic casting defects such as erosion, penetration and surface roughness can thus be prevented by the presence of such carbon carriers.

Good reasons for using our LC formers:

- Reduction in the wettability of the mold surface through the formation of a reducing gaseous hydrocarbon atmosphere
- Absorption of compressive stresses produced within the mold during casting
- Reduced environmental burden with organic crack emissions minimized due to a low consumption of additives

Maximum recyclability through improved mold collapse and sand/casting separation at shakeout. We have the right Lustrous Carbon formers for every application. conditions. Our Lustrous Carbon Powder also acts as a partion joint between sand and metal in order to avoid distortion of metal surface after cooling. Because of Low Ash and High Volatiles content, our Lustrous Carbon Powder evaporates from sand bath faster and does not allow effect of sand on the metal.

Specification	Pioneer	Pioneer P	Pioneer HPL
Volatile Matter	50 - 60%	50 - 55%	40 - 50%
ASH Content	5 %	5 %	7 %
Fixed Caron	by Difference	by Difference	by Difference

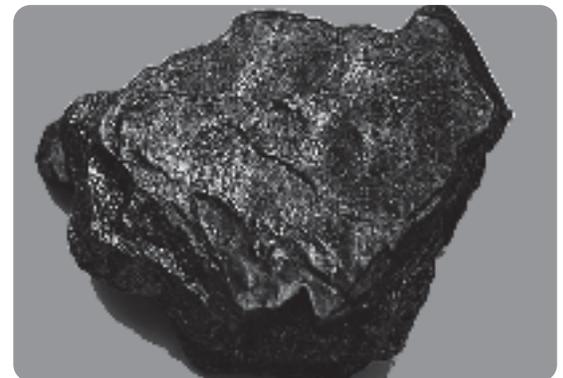


GRAPHITE

We are one of the leading supplier and exporter of natural graphite and industrial synthetic graphite we offer different grads of graphite which is available in flakes powder and in different sizes.

Application : Refractory, Steel making , foundry Industry, Chemical Industry, nuclear Industry, Electrical Application, Batteries, Brake Lining, pencil Contraction Industry.

GRADE	FC (%)	S (%)	N (%)	ASH (%)	SIZE (mm)
Graphite	99.0-99.8	0.01-0.03	0.025	<0.5	5-10
	99.0-99.8	0.01-0.04	0.025	<0.5	0-5
	99.0-99.8	0.01-0.04	0.025	<0.5	0-1
Carburizer	99.0 min	0.4max	N/A	<0.5	0-3
	93-95	0.20-0.30	N/A	<4.0	1.0-5.0
	93-95	0.20 max	N/A	<4.0	1.0-5.0

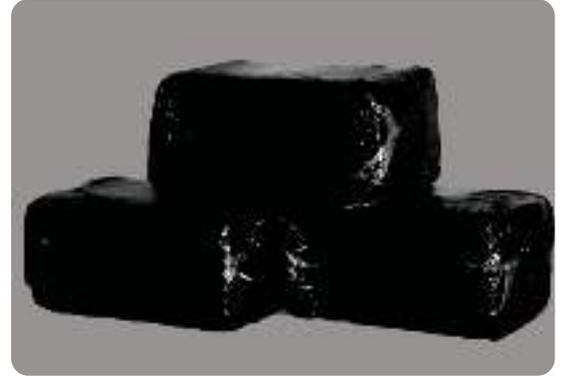


TAP HOLE CLAYS

Tap hole clays are used for plugging of the Tap hole of Blast Furnace. Tap hole is an outlet for hot metal produced in a Blast Furnace. The major objective of this material is not only to plug the Tap hole but also to be drilled for the subsequent cast. The mud gun pushes the Tap hole clay into Tap hole of Blast Furnace where it hardens and checks the hot metal and slag from coming out of Blast Furnace.

Role of tap hole mass:-

- Allow Controlled Flow of Metal & Slag
- Ideally retain its shape & size throughout casting period
- Protect Hearth Lining in the Vicinity of Tap Hole
- Seal the metal flow when plugged in hole.
- Improve life of iron trough & hood by controlled flow of metals and slag



CARBON ELECTORDE PASTE

We are manufacturing high quality carbon electrode paste which is a self baking electrode used in electric/submerged arc furnace for delivering power to the charge mix. Carbon Electrode Paste is a mix of electrically calcined anthracite or CPC with coal tar pitch.

Properties	Unit	CPC Base	ECA Base
Plasticity	%	As per requirement (30-35)	As per requirement (30-35)
Fixed Carbon	%	87 min	83 min.
Volatile matter	%	12-13	11-12
ASH	%	0.5 max	5.0 max
Apparent Density	gm/cc	1.68 min	1.68 min



CALCINED PETROLEUM COKE

Calcined Petroleum Coke (CPC) is manufactured from Raw Petroleum Coke (RPC) by the process known as high temperature pyrolysis. The process is carried out in a rotary or vertical kiln at temperatures exceeding 1300 deg C. Calcination of CPC is essentially a high temperature treatment in which the carbon to hydrogen ratio of RPC is increased from 20 to 1000 and above. Calcination is achieved by complete demoustrisation and dehydrogenation of RPC under controlled conditions. During the process molecular rearrangement takes place making the CPC electrically conductive, an essential property required for Aluminium smelting.

Application:

Major use is in the aluminium industry for the production of pre-baked carbon anodes used in the smelting process. It is also used as basic raw material for manufacturing graphite electrodes, as a raw material for production of titanium dioxide. Calcined coke is generally manufactured as per customer requirements.

Product No.	Specification	Application
CPC - 1	F.C.>98.5%, S<1.0%, V.M.<1.0%, H2O<0.5%, Ash<1.0%	Steel making, foundry industries
CPC - 2	F.C.>98.5%, S<3.0%, V.M.<0.5%, H2O<0.3%, Ash<0.4%	Aluminum industries





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