

PCN250S/FDX PERPETUAL CARBON™

CARBONISED BIOCOAL POWDER



Perpetual Carbon powder exhibits good potential to act as a drop-in replacement for a variety of different fossil fuels. It can be used as a substitute for PCI coal (Pulverized Coal Injection) in blast furnace, as a substitute for sinter process or for metallurgic blast furnace processing.

PCN250S/FDX Origin: Forest, plantation and other virgin wood. Traded form: powder (Dust).

Benefits

- Renewable substitute
- Alternative to fossil brown coal (lignite solid fuel)
- Up to 2.4 t CO₂ emissions avoided per ton PCN250S
- CO₂-emission factor lignite powder (= 101 kg CO₂/GJ) x CO₂ price (= EU ETS Price in €/ton CO₂)
- High energy density 25 MJ/kg & 66% Carbon

Applications

- Substitute fuel for cement kiln
- Solid substitute for PCI coal in blast furnace
- Solid substitute for sinter process
- Solid for metallurgic blast furnace processing
- Solid feedstock for gasification
- Infra-structure additive



Parameter	Unit	Spec Biocoal Powder*			Testing Standard
		Min.	Typical	Max.	
Particle size < 2,0 mm	w-%	99	-	100	ISO 17829
Particle size < 0,25 mm	w-%	60	-	-	ISO 17829
Particle size < 0,125 mm	w-%	30	-	-	ISO 17829
Bulk Density, BD	kg/m ³ as received	250	300	350	ISO 17828
Moisture **	w-% as received	2.6	3.0	3.3	ISO 18134-1, ISO 18134-2
Ash (composition available)	w-% dry	1.4	2.3	2.8	ISO 18122
Net Calorific Value, NCV (dry) ***	MJ/kg dry	24.0	25.0	26.0	ISO 18125
Net Calorific Value, NCV (a.r.)	MJ/kg as received	23.0	24.0	25.0	ISO 18125
Carbon, C	w-% dry	64.0	66.0	68.0	ISO 16948
Fixed Carbon (a.r.)	w-% as received	35.0	39.0	42.0	ISO 17225
Fixed Carbon (d.a.f.)	w-% dry, ash free	37.0	41.0	45.0	ISO 17225
Nitrogen, N	w-% dry	0.3	0.4	1.0	ISO 16948
Hydrogen, H	w-% dry	-	5.5	6.0	ISO 16948
Oxygen, O	w-% dry	26.5	28.0	30.0	ISO 16948
Volatiles	w-% dry	55.5	59.0	63.0	ISO 18123
Sulphur, S	w-% dry	-	0.1	0.1	ISO 16994
Chlorine, Cl	w-% dry	-	<0.1	0.1	ISO 16994
Arsenic, As	mg/kg dry	-	<0.2	0.2	ISO 16968
Cadmium, Cd	mg/kg dry	-	0.8	0.9	ISO 16968
Chromium, Cr	mg/kg dry	-	-	20.0	ISO 16968
Copper, Cu	mg/kg dry	-	-	20.0	ISO 16968
Lead, Pb	mg/kg dry	-	6.0	9.0	ISO 16968
Manganese, Mn	mg/kg dry	-	221.0	322.0	ISO 16968
Mercury, Hg	mg/kg dry	-	-	0.1	ISO 16968
Nickel, Ni	mg/kg dry	-	-	20.0	ISO 16968
Zinc, Zn	mg/kg dry	-	68.0	82.5	ISO 16968

* All information in this specification is based on measurements by a certified laboratory as per the referenced ISO norm
 ** Typical moisture after manufacture, can vary on storage and atmospheric conditions
 *** Calculated using typical moisture reference