



TECHNICAL SPECIFICATIONS FOR HARD COKING COAL (SIZE 0-50 MM):

Total Moisture (ARB)	10%	max
Ash (ADB)	8%	max
Volatile Matter (ADB)	20 - 32%	Approx.
Sulphur (ADB)	0.85%	max
Sizing 0 x 50mm	90%	min
Below specifications for reference only:		
CSN	8-9	Rejection < 6
Max Fluidity	450ddpm	Rejection < 300
MMR	1.2-1.3%	Rejection > 1.40

Other Coking Properties

- i) Fraction below 0.5 mm - < 20%
- ii) Inherent Moisture – 1.6%
- iii) Fixed Carbon – 67.6%
- iv) Gray King Coke Type (ISO/502 –1974) – G11
- v) Gieseler Plastometer Test (ASTM D-2639)
 - a) Fluidity Range (at 5 DDPM) - 450
 - b) Initial Softening Temperature (5 ddpm) – 415⁰C
- vi) a) Petrographic composition (%) (ISO-7404)
 - Vitrinite - 97.5
 - Semi Vitrinite -
 - Exinite -
 - Inertinite - 1.5
 - Mineral Matter - 1.0
 - b) Break up of Vitrinite % as (ISO-7404)

V5	V13 - 3
V6	V14
V7	V15
V8	V16
V9	V17
V10	V18
V11 - 15	V19
V12 - 82	V20

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**vii. Expansion Pressure on oven walls by solo oven test/
movable wall oven test for straight carbonisation - 4.9 KPA**

viii. Properties of coke produced by straight carbonisation of coal

a) Coke Yield	-	74.7%	
b) Micum index		M 40 – 55.5	M 10 – 9.2
c) CSR	-	48.8	
d) CRI	-	31.4	

ix. Complete analysis of coke ash

SiO ₂ – 55.4	MnO –
Al ₂ O ₃ – 25.4	P ₂ O ₅ – 0.50
Fe ₂ O ₃ – 8.25	TiO ₂ – 1.20
CaO – 2.12	SO ₃ – 1.88
MgO – 1.05	Alkalies – <4%

x. Ash Fusion Temperature (Degree C):

Initial deformation	- 1320
Hemispherical	- 1480
Free flowing	- 1520

xi. Phosphorous – 0.03% Max