




COAL PRODUCTS SPECIFICATION SHEET

Coal Specification			Run of Mine (4,800 - 5,500 Kcal/kg)				Washed Ungraded Coal (5,900 - 6,200 Kcal/kg)				Washed Duff (5,900 - 6,200 Kcal/kg)				Washed Peas (5,900 - 6,200 Kcal/kg)				Washed Nuts (5,900 - 6,200 Kcal/kg)				Washed Cobbles (5,900 - 6,200 Kcal/kg)			
Parameter	UoM	Std	Min	Avg	Max	Reject	Min	Avg	Max	Reject	Min	Avg	Max	Reject	Min	Avg	Max	Reject	Min	Avg	Max	Reject	Min	Avg	Max	Reject
Total Moisture	%	ARB	8.0	9.0	10.0	>12	8.0	9.0	10.0	>12	8.0	9.0	10.0	>12	8.0	9.0	10.0	>12	8.0	9.0	10.0	>12	8.0	9.0	10.0	>12
Inherent Moisture	%	ADB	3.0	4.0	5.5	>7	3.0	4.0	5.5	>7	3.0	4.0	5.5	>7	3.0	4.0	5.5	>7	3.0	4.0	5.5	>7	3.0	4.0	5.5	>7
Ash Content	%	ADB	20.0	24.0	28.0	>30	13.5	14.6	16.5	>17	13.5	14.6	16.5	>17	13.5	14.6	16.5	>17	13.5	14.6	16.5	>17	13.5	14.6	16.5	>17
Volatile Matter	%	ADB	20.0	22.0	25.0	<19	22.5	23.0	25.0	<21.5	22.5	23.0	25.0	<21.5	22.5	23.0	25.0	<21.5	22.5	23.0	25.0	<21.5	22.5	23.0	25.0	<21.5
Fixed Carbon	%	ADB	44.0	51.5	56.0	<42	54.0	57.0	59.0	<52	54.0	57.0	59.0	<52	54.0	57.0	59.0	<52	54.0	57.0	59.0	<52	54.0	57.0	59.0	<52
Total Sulphur	%	ADB	0.50	1.00	2.00	>2.5	0.20	0.50	1.00	>1.2	0.20	0.50	1.00	>1.2	0.20	0.50	1.00	>1.2	0.20	0.50	1.00	>1.2	0.20	0.50	1.00	>1.2
Calorific Value	MJ/kg	ADB	21.00	22.00	23.00	<19.5	25.00	25.50	25.80	<24.80	25.00	25.50	25.70	<24.80	25.00	25.50	25.80	<24.80	25.00	25.50	25.70	<24.80	25.00	25.50	25.80	<24.80
Calorific Value	MJ/kg	TDB	21.65	22.92	24.34	<20.5	25.77	26.56	27.30	<25.90	25.77	26.56	27.20	<25.90	25.77	26.56	27.30	<26.00	25.77	26.56	27.20	<25.90	25.77	26.56	27.30	25.90
Calorific Value	kcal/kg	ADB	5,016	5,255	5,493	<4650	5,971	6,091	6,162	<5850	5,971	6,091	6,138	<5850	5,971	6,091	6,162	<5850	5,971	6,091	6,138	<5850	5,971	6,091	6,162	<5850
Phosphorus	%	ADB	0.020	0.040	0.060		0.020	0.040	0.060		0.020	0.040	0.060		0.020	0.040	0.060		0.020	0.040	0.060		0.020	0.040	0.060	
Size	mm		0.0		32.0		0.0		110.0		0.0		16.0		16.0		32.0		25.0		40.0		40.0		110.0	
Size Lower Limit			<30% passing 3.35mm				<10% passing 1.40mm				<10% passing 1.6mm				<10% passing 25mm				<10% passing 40mm							
Size Upper Limit			32mm retained <10%				16mm retained <5%				32mm retained <5%				40mm retained <5%				75mm retained <15%							
HGI		Index	40	45	50		45	50	55		45	50	55		45	50	55		45	50	55		45	50	55	
Abrasiveness		mgFe*	150	180	200		80	90	100		60	75	90		80	100	120		50	70	90		50	70	90	

Parameter	Ultimate Analysis				Ash Fusion Temperature - Reducing Atmosphere				Ash Fusion Temperature - Oxidising Atmosphere				Forms of Sulphur			
	%	%	%	%	°C	°C	°C	°C	°C	°C	°C	°C	%	%	%	
Run of Mine	Min	55.00	2.30	1.30	6.50	Def	Soft	Hem	Flow	Def	Soft	Hem	Flow	Mineral (Pyritic)	Sulphate	Organic
	Max	65.00	3.30	1.50	8.50	1250	1280	1300	1320	1280	1330	1350	1400	0.8	0.012	0.2
Washed Coal	Min	60.00	3.50	1.40	7.50	1350	1370	1390	1420	1370	1400	1450	1500	0.1	0.015	0.05
	Max	70.00	4.50	1.60	10.50	1370	1380	1400	1440	1370	1400	1450	1470	0.4	0.05	0.2

		Ash Constituent Analyses																		
		%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
		SiO ₂	CaO	MgO	Fe ₂ O ₃	Al ₂ O ₃	Na ₂ O	K ₂ O	TiO ₂	SO ₃	P ₂ O ₅	BaO	MnO	Cr ₂ O ₃	Cu	Ni	SrO	V	Zn	ZrO ₂
Run of Mine	Min	38.0	7.50	2.00	7.50	23.0	0.500	0.20	1.20	8.5	0.150	0.100	0.070	0.020	0.003	0.004	0.080	0.005	0.005	0.040
	Max	41.0	9.00	2.30	14.00	30.0	0.900	0.40	1.80	11.0	0.350	0.200	0.130	0.050	0.009	0.020	0.180	0.020	0.015	0.070
Washed Coal	Min	37.0	5.50	1.50	2.00	30.0	0.600	0.30	1.50	4.0	0.200	0.150	0.060	0.020	0.005	0.005	0.090	0.007	0.004	0.055
	Max	50.0	9.00	3.10	5.50	37.0	1.200	0.50	2.30	9.0	0.600	0.250	0.130	0.060	0.014	0.025	0.240	0.025	0.015	0.090


 Authorised Signature
 Elvidge Radithongwa
 Production Manager

	METHOD USED		METHOD USED		METHOD USED
Sample Preparation	ISO 13909-4	Fixed Carbon	By difference	Hardgrove Grindability Index	ASTM 409
Particle Size Distribution	ISO 1953	Calorific Value(MJ/kg)	ISO 1928	Ash Fusion Temperature	ISO 540 & ASTM D4326
Ash %	ISO 1171	Total Sulphur %	ASTM D4239	CHN	ISO 28541
Moisture %	SANS 5925	Phosphorus	Lab developed	Forms of Sulphur	ISO 157
Volatile %	ISO 562	Sampling	ISO 18283		