
COAL QUALITY SPECIFICATION

№ ETT_SP_TC



ISO 45001:2018



ISO 9001:2015



ISO 14001:2015



COAL STOCKPILES QUALITY (weighted average)

<p>TOTAL MOISTURE (ar)</p> <p>6.0%</p> <p>(-3.0; +3.0)</p>	<p>ASH (db)</p> <p>21.5%</p> <p>(-5.0; +5.0)</p>	<p>VOLATILE MATTER (daf)</p> <p>34.0%</p> <p>(Max)</p>
<p>TOTAL SULPHUR (db)</p> <p>1.5</p> <p>(max)</p>	<p>Calorific value CV (ar)</p> <p>5500</p> <p>(-500; +700)</p>	<p>G INDEX</p> <p><5.0</p>

THE FOLLOWING IS THE RESULT OF THE LABORATORY TESTS

ALS GROUP LLC
Mongol Nekhmel Building, 2nd khoroo
Chinggis Avenue, Khan-Uul District
Ulaanbaatar, Mongolia
Tel +976 70 007667



CERTIFICATE OF ANALYSIS
22L58, 77, 94-TT, 23A06, 08, 11, 27, 42, 89, 93-TT, 23B12, 34, 41-TT

CLIENT: Erdenes Tavantolgoi JSC
ADDRESS: Finance Center, Jigjidjav-8
1st khoroo, Chingeltei District
Ulaanbaatar, Mongolia
ATTN: Erdenebilegt.E
PROJECT NO. xxx
LAB. JOB NO. 22L58, 77, 94-TT, 23A06, 08, 11, 27, 42, 89, 93-TT, 23B12, 34, 41-TT
NO. SAMPLES: 20
Notes/Comments: xxx

SAMPLES RECEIVED: 09/May/22
INSTRUCTIONS RECEIVED: 09/May/22
DATE OF REPORT: 09/May/22
STATUS OF REPORT: FINAL
ANALYSIS COMPLETE: 09/May/22
PREPARATION CODE: CRUSH-01, 02; MILL-01
ANALYSIS CODE: 1.1 COKING COAL
2.1 THERMAL COAL
TM, MOIS, ASH, VOL, TSUL,
GCV, CSN, CKIN

APPROVED BY: Laboratory Manager

Quality Manager

CHECKED BY: Chief Chemist

These test results are representative only of the sample received in the laboratory.

LAB NO.	SAMPLE NO.	STANDARD METHOD											
		GB/T 211	GB/T 212	GB/T 212	GB/T 212	ISO 19579	GB/T 213	GB/T 212	GB/T 212	GB/T 212	GB/T 212	ISO 19579	GB/T 213
		AS RECEIVED BASIS						AIR DRIED BASIS					
Total Moisture (TM)	Ash (ASH)	Volatiles Matter (VOL)	Fixed Carbon (FC)	Total Sulphur (TSUL)	Gross Calorific Value (GCV)	Moisture (MOIS)	Ash (ASH)	Volatiles Matter (VOL)	Fixed Carbon (FC)	Total Sulphur (TSUL)	Gross Calorific Value (GCV)		
%						%						kcal/kg	
1	WSS-22-8-1tr-1A-491	7.66	24.48	21.93	45.92	0.54	5232	1.63	26.08	23.36	48.92	0.58	5574
2	WSS-22-8-1tr-1B-492	10.88	20.34	22.24	46.54	0.47	5170	3.26	22.08	24.14	50.51	0.51	5612
3	WSS-22-8-1tr-1C-493	8.75	22.73	21.86	46.66	0.60	5298	2.39	24.31	23.38	49.92	0.64	5667
4	WSS-22-8-1tr-1D-494	7.07	20.61	22.58	49.75	0.68	5747	1.83	21.77	23.85	52.55	0.72	6071
5	WSS-22-8tr-2A-522	5.78	16.40	24.40	53.41	0.56	6368	1.59	17.13	25.49	55.79	0.58	6651
6	WSS-22-8tr-2B-539	9.86	14.56	25.29	50.29	0.57	5840	2.42	15.76	27.38	54.44	0.62	6322
7	WSS-22-8tr-2C-541	6.71	18.69	24.13	50.47	0.34	6024	1.73	19.68	25.42	53.17	0.36	6346
8	WSS-22-8tr-2D-542	10.14	14.01	25.17	50.67	0.42	5773	2.86	15.15	27.21	54.78	0.46	6241
9	WSS-23-8tr-3A-2	9.19	14.85	24.27	51.68	0.33	6000	2.74	15.91	26.00	55.35	0.35	6426
10	WSS-23-8tr-3B-3	11.57	19.42	22.58	46.42	0.36	5135	3.82	21.13	24.56	50.49	0.39	5585
11	WSS-23-8tr-3C-4	11.27	17.56	22.86	48.31	0.37	5422	3.46	19.11	24.87	52.56	0.40	5899
12	WSS-23-8tr-3D-10	12.20	16.40	23.88	47.51	0.36	5292	3.49	18.03	26.25	52.23	0.40	5817

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.
COPY RIGHT PROTECTED DOCUMENT

STANDARD METHOD		GB/T 211	GB/T 212	GB/T 212	GB/T 212	ISO 19579	GB/T 213	GB/T 212	GB/T 212	GB/T 212	GB/T 212	ISO 19579	GB/T 213		
LAB NO.	SAMPLE NO.	AS RECEIVED BASIS					AIR DRIED BASIS								
		Total Moisture (TM)	Ash (ASH)	Volatile Matter (VOL)	Fixed Carbon (FC)	Total Sulphur (TSUL)	Total	Gross	Moisture	Ash	Volatile	Fixed	Total	Gross	
					%		kcal/kg		%					kcal/kg	
13	WSS-23-8tr-4A-15	7.39	16.19	24.01	52.41	0.44	6100	2.06	17.12	25.39	55.42	0.46	6451		
14	WSS-23-8tr-4B-16	6.94	16.81	24.24	52.01	0.47	6046	2.53	17.60	25.39	54.47	0.49	6332		
15	WSS-23-8-1tr-4C-26	6.22	32.22	20.05	41.50	1.05	4974	0.98	34.03	21.18	43.82	1.11	5252		
16	WSS-23-8-1tr-4D-42	5.75	20.35	22.83	51.06	1.08	6076	0.93	21.40	24.00	53.68	1.13	6387		
17	WSS-23-8-1tr-5A-63	5.50	15.91	26.76	51.83	0.56	6258	0.84	16.70	28.08	54.38	0.59	6566		
18	WSS-23-8-1tr-5B-83	5.92	24.12	22.44	47.52	0.33	5471	1.88	25.16	23.40	49.56	0.35	5706		
19	WSS-23-8-1tr-5C-96	5.56	19.03	24.13	51.29	0.36	5942	1.90	19.76	25.06	53.27	0.37	6172		
20	WSS-23-8-1tr-5D-97	5.81	16.05	23.54	54.61	0.39	6287	1.76	16.74	24.55	56.95	0.40	6558		

QUALITY ASSURANCE/QUALITY CONTROL DATA

STDALSWS-23/20	ASH	VOL	GCV	TSUL
Certified Value	18.85	18.16	7673	0.616
Standard Deviation	0.05	0.16	17	0.017
Unit:	%	%	kcal/kg	%
Analyzed value:	10.88	18.13	7671	0.616

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DATE OF REPORT: 09/May/22
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ANALYSIS COMPLETE: 09/May/22
PREPARATION CODE: CRUSH-01, 02; MILL-01
ANALYSIS CODE: 1.1_COKING COAL
2.1_THERMAL COAL
TM, MOIS, ASH, VOL, TSUL,
GCV, CSN, CKIN

These test results are representative only of the sample received in the laboratory.

STANDARD METHOD		GB/T 212	GB/T 212	GB/T 212	ISO 19579	GB/T 213	GB/T 212	GB/T 212	ISO 19579	GB/T 213	GB/T 5447		
LAB NO.	SAMPLE NO.	DRY BASIS					DRY, ASH-FREE BASIS					Coal Caking Index (CKIN)	
		Ash (ASH)	Volatile Matter (VOL)	Fixed Carbon (FC)	Total Sulphur (TSUL)	Gross Calorific Value (GCV)	Volatile Matter (VOL)	Fixed Carbon (FC)	Total Sulphur (TSUL)	Gross Calorific Value (GCV)			
					%		%		kcal/kg		5:1	3:3	
1	WSS-22-8-1tr-1A-491	26.52	23.75	49.73	0.59	5666	32.32	67.68	0.80	7710	-	0	
2	WSS-22-8-1tr-1B-492	22.83	24.96	52.22	0.52	5801	32.34	67.66	0.68	7516	-	0	
3	WSS-22-8-1tr-1C-493	24.91	23.96	51.14	0.66	5806	31.90	68.10	0.88	7732	-	0	
4	WSS-22-8-1tr-1D-494	22.17	24.29	53.53	0.73	6184	31.22	68.78	0.94	7946	-	10	
5	WSS-22-8tr-2A-522	17.41	25.90	56.69	0.59	6759	31.36	68.64	0.72	8184	-	1	
6	WSS-22-8tr-2B-539	16.15	28.06	55.79	0.63	6479	33.46	66.54	0.75	7727	-	2	
7	WSS-22-8tr-2C-541	20.03	25.87	54.10	0.36	6457	32.35	67.65	0.45	8075	-	13	
8	WSS-22-8tr-2D-542	15.59	28.01	56.39	0.47	6424	33.19	66.81	0.56	7611	-	0	
9	WSS-23-8tr-3A-2	16.36	26.73	56.91	0.36	6608	31.96	68.04	0.43	7900	-	0	
10	WSS-23-8tr-3B-3	21.97	25.54	52.50	0.41	5807	32.72	67.28	0.53	7441	-	0	
11	WSS-23-8tr-3C-4	19.79	25.76	54.44	0.42	6110	32.12	67.88	0.52	7618	-	0	
12	WSS-23-8tr-3D-10	18.68	27.20	54.12	0.41	6028	33.45	66.55	0.50	7412	-	0	

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STANDARD METHOD		GB/T 212	GB/T 212	GB/T 212	ISO 19579	GB/T 213	GB/T 212	GB/T 212	ISO 19579	GB/T 213	GB/T 5447		
LAB NO.	SAMPLE NO.	DRY BASIS					DRY, ASH-FREE BASIS					Coal Caking Index (CKIN)	
		Ash (ASH)	Volatile Matter (VOL)	Fixed Carbon (FC)	Total Sulphur (TSUL)	Gross Calorific Value (GCV)	Volatile Matter (VOL)	Fixed Carbon (FC)	Total Sulphur (TSUL)	Gross Calorific Value (GCV)			
		%					kcal/kg	%			kcal/kg	5:1	3:3
13	WSS-23-8tr-4A-15	17.48	25.93	56.59	0.47	6587	31.42	68.58	0.57	7983	-	0	
14	WSS-23-8tr-4B-16	18.06	26.05	55.89	0.50	6496	31.79	68.21	0.61	7928	-	5	
15	WSS-23-8-1tr-4C-26	34.36	21.39	44.25	1.12	5305	32.58	67.42	1.70	8082	-	14	
16	WSS-23-8-1tr-4D-42	21.60	24.22	54.18	1.14	6447	30.90	69.10	1.46	8223	39	-	
17	WSS-23-8-1tr-5A-63	16.84	28.32	54.84	0.59	6622	34.05	65.95	0.71	7963	50	-	
18	WSS-23-8-1tr-5B-83	25.64	23.85	50.51	0.35	5815	32.07	67.93	0.47	7821	-	0	
19	WSS-23-8-1tr-5C-96	20.15	25.55	54.31	0.38	6292	31.99	68.01	0.47	7879	-	1	
20	WSS-23-8-1tr-5D-97	17.04	24.99	57.97	0.41	6675	30.12	69.88	0.50	8046	-	1	

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