

Section 9 Coal(Powder)

Number	Name	Total Sulfur (%)	Ash (%)	Volatile Matter (%)	Calorific Value (MJ/kg)	Carbon (%)	Hydrogen (%)	Nitrogen (%)	True Specific Gravity (20°C)	Coal Type	Unit Size (g)
NCS FC11001	Coal	0.25	10.21	30.31	28.38	72.34	3.99	1.01	1.48	bitumite	50
NCS FC11002	Coal	0.41	6.44	30.82	28.51	74	3.83	0.84	1.51	bitumite	50
NCS FC11003	Coal	0.47	20.25	26.57	22.43	61.32	2.7	0.62	1.73	bitumite	50
NCS FC11004	Coal	0.78	9.23	32.28	26.57	70.18	3.56	0.83	1.56	bitumite	50
NCS FC11005	Coal	0.97	10.28	30.54	26.25	69.75	3.31	0.75	1.6	bitumite	50
NCS FC11006	Coal	1.56	16.26	18.85	27.39	71.06	3.21	0.99	1.57	bitumite	50
NCS FC11007	Coal	1.72	12.56	31.55	25.31	67.09	3.29	0.76	1.63	bitumite	50
NCS FC11008	Coal	1.59	25.64	28.81	22.12	57.2	3.28	0.82	1.68	bitumite	50
NCS FC11009	Coal	1.81	15.63	23.29	26.61	69.09	3.32	0.92	1.57	bitumite	50
NCS FC11010	Coal	0.44	13.47	10.67	30.4	78.36	3.23	1.13	1.54	anthracite	50
NCS FC11011	Coal	1.08	9.2	10.49	32.2	82.11	3.41	1.21	1.45	anthracite	50
NCS FC11012	Coal	1.55	10.84	9.28	31.45	80.98	3.23	0.95	1.47	anthracite	50
NCS FC11013	Coal	0.63	6.96	32.63	27.78	72.03	3.77	0.85	1.52	bitumite	50
NCS FC11014	Coal	0.41	6.19	34.14	30.54	76.38	4.46	0.97	1.41	bitumite	50
Number	Name	Deformation temperature		Softening Temperature		Hemispherizing Temperature		Fluid temperature		Unit Size (g)	
NCS FS82002	Fusibility of Coal Ash	1171		1198		1217		1265		50	
NCS FS82003	Fusibility of Coal Ash	1148		1178		1196		1251		50	
NCS FS82004	Fusibility of Coal Ash	1198		1236		1256		1291		50	
NCS FS82005	Fusibility of Coal Ash	1164		1201		1245		1298		50	
NCS FS82006	Fusibility of Coal Ash	1348		1392		1402		1430		50	
Number	Name	Hg	As	F	P*	Cl*	Unit Size (g)				
NCS FC82023	Hg, As, P, F, Cl in Coal	0.576	16	148	0.021	0.03	50				
NCS FC82024	Hg, As, P, F, Cl in Coal	0.794	13	153	0.022	0.01	50				
NCS FC82025	Hg, As, P, F, Cl in Coal	0.975	21	179	0.026	0.047	50				

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Number	Name	Chemical Composition(Percent)									Unit Size (in g)			
		Total Sulfur	Ash	Volatile matter		Calorific Value	Carbon	Hydrogen	Nitrogen	True Specific Gravity		Coal Type		
NCS FC 28001L	Coal	0.52	9.80	24.10		31.70	78.77	4.33	1.32	1.32	bitumite	50		
NCS FC 28001m	Coal	0.56	9.60	24.03		32.09	79.24	4.35	1.31	1.31	bitumite	50		
NCS FC 28002j	Coal	1.61	23.69	30.22		23.75	60.00	3.67	1.07	1.07	bitumite	50		
NCS FC 28003f	Coal	0.28	16.27	6.51		26.38	78.10	0.93	0.23	0.23	anthracite	50		
NCS FC 28003g	Coal	0.39	24.38	5.39		23.93	70.95	0.76	0.30	0.30	anthracite	50		
NCS FC 28004e	Coal	1.00	28.07	4.97		23.78	66.70	1.43	0.72	0.72	anthracite	50		
NCS FC 28004f	Coal	1.13	13.80	7.02		29.43	79.13	2.23	1.13	1.13	anthracite	50		
NCS FC 28005e	Coal	1.76	14.28	8.69		29.61	77.83	2.73	0.85	0.85	anthracite	50		
NCS FC 28006j	Coal	0.88	17.44	30.99		26.88	66.99	4.07	1.19	1.19	bitumite	50		
NCS FC 28007g	Coal	1.83	14.70	34.51		27.51	68.05	4.20	1.20	1.20	bitumite	50		
NCS FC 28008e	Coal	2.78	15.54	35.09		28.13	68.22	4.44	1.22	1.22	bitumite	50		
NCS FC 28009f	Coal	4.34	25.42	21.68		24.71	61.46	3.34	1.06	1.06	bitumite	50		
NCS FC 28010e	Coal	1.36	15.75	33.22		26.80	66.92	4.09	1.17	1.17	bitumite	50		
NCS FC 28011d	Coal	2.23	20.40	6.39		26.35	72.11	1.84	0.85	0.85	anthracite	50		
NCS FC 28012c	Coal	3.07	19.70	10.77		27.37	70.39	2.90	1.10	1.10	anthracite	50		
NCS FC 28017a	Coal	0.26	14.56	5.77		27.12	80.19	0.98	0.23	0.23	anthracite	50		
Number	Name	Ts	Ash	Volatile		Chemical Composition(Percent)					Unit Size (in g)			
NCS FC 59001	Coke	0.63	7.22	1.39							60			
NCS FC 59002	Coke	0.47	12.62	1.50							60			
Number	Name	M _{ad} (%)	A _{ad} (%)	A _d (%)	V _{ad} (%)	V _d (%)	S _{v,ad} (%)	S _{v,d} (%)	O _{grad} (MJ/kg)	Q _{gr,d} (MJ/kg)	Unit Size (in g)			
NCS FC 62001	Bituminous Coal for Cement	3.76	21.58	22.42	22.90	23.79	1.43	1.49	24.37	25.32	20			
NCS FC 62002	Anthracite Coal for Cement	3.70	25.18	26.15	5.81	6.03	0.21	0.22	22.36	23.22	20			
Number	Name	Chemical Composition(Percent)				Chemical Composition(Percent)					Unit Size (mm)			
		As*	P	Cl	F*	SiO ₂	SO ₃	TiO ₂	K ₂ O	Na ₂ O	P ₂ O ₅			
NCS FC 82001	Coal	15	0.03	1								50		
NCS FC 82002	Coal	34	0.007									50		
NCS FC 82003	Coal	51	0.092									50		
NCS FC 82004	Coal				0.010							50		
NCS FC 82005	Coal				0.057							50		
NCS FC 82006	Coal				0.110							50		
NCS FC 82008	Fluorine in coal				864.00							50		
*Mass Fraction Substance(10 ⁶)														
Number	Name	Chemical Composition(Percent)									Unit Size (in g)			
		SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	CaO	MgO	SO ₃	TiO ₂	K ₂ O	Na ₂ O	P ₂ O ₅			
NCS FC 82012b	Coal Ash	46.99	29.45	7.95	8.73	1.03	0.69	1.28	1.16	0.79	0.28	30		
Number	Name	Chemical Composition(Percent)												Unit Size (in g)
		Q _{gr,d} (MJ/kg)	St.d	Ad	Vd	SiO ₂	Al ₂ O ₃	CaO	MgO	F ₂ O ₃	TiO ₂	Na ₂ O	K ₂ O	
NCS FC 28019b	coke	29.08	0.67	11.64	1.31	5.52	4.17	0.45	0.094	0.55	0.18	0.08	0.058	50
NCS FC 28020b	coke	28.26	0.76	14.42	1.78	6.52	4.95	0.52	0.15	1.22	0.22	0.05	0.079	50
NCS FC 28022b	coke	29.10	0.81	11.90	1.68	5.63	3.98	0.55	0.16	0.63	0.18	0.084	0.069	50
NCS FC 28023	coke	27.56	1.44	16.20	1.80	8.17	5.28	0.57	0.097	0.96	0.20	0.067	0.11	50
		MnO	SrO	P	Cr	Ni	Cu	V	Pb	As	Cl			
NCS FC 28019b	coke	0.0049	0.01	0.027	0.0015	0.001	0.0018	0.0027	0.0009	0.0001	0.024			
NCS FC 28020b	coke	0.0052	0.017	0.037	0.0022	0.0008	0.0027	0.0038	0.0011	0.00014	0.02			
NCS FC 28022b	coke	0.013	0.011	0.018	0.0022	0.0008	0.002	0.0032	0.0008	0.0002	0.049			
NCS FC 28023	coke	0.0044	0.0084	0.018	0.0021	0.001	0.0018	0.0037	0.0008	0.00024	0.022			

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Number	Name	Chemical Composition(Percent)					Unit Size (mm)				
		St,d	Ad	Vd	Qgr,d(MJ/kg)	P					
NCS FC 28024	coke	0.41	15.43	1.98	28.17	0.041	50				
NCS FC 28025	coke	0.62	11.5	1.31	29.32	0.021	50				
NCS FC 28026	coke	0.79	12.18	1.36	28.95	0.031	50				
NCS FC 28027	coke	0.89	14.83	1.65	28.12	0.026	50				
Number	Name	Chemical Composition(Percent)			Unit Size (in g)						
		Ts	Ash	Volatile							
NCS FC 93001	Coke	0.60	12.88	1.75	50						
NCS FC 93002	Coke	0.78	13.70	2.00	50						
NCS FC 93006	Coke	2.15	21.53	4.92	50						
Number	Name	Certified Value(HGI)	Chemical Composition							Unit Size (in g)	
			Total Sulfur (%)	Ash (%)	Volatile (%)	Calorific (MJ/kg)	Carbon (%)	Hydrogen (%)	Nitrogen (%)		True specific Gravity(20°C)
NCS AG 82001	Hadgrove Grindability Index of Coal	34								250	
NCS AG 82002	Hadgrove Grindability Index of Coal	59								250	
NCS AG 82003	Hadgrove Grindability Index of Coal	88								250	
NCS AG 82004	Hadgrove Grindability Index of Coal	121								250	
Number	Name	Total Sulfur (%)	Ash (%)	Volatile (%)	Calorific (MJ/kg)	Carbon (%)	Hydrogen (%)	Nitrogen (%)	True specific Gravity(20°C)	Coal Type	Unit Size (in g)
NCS FC 28101	Coal	0.2	3.95	6.64	34.34	90.27	3.01	0.6	1.47	anthracite	50
NCS FC 28102	Coal	0.19	6.46	7.9	33.1	87.47	2.86	0.6	1.5	anthracite	50
NCS FC 28103	Coal	0.36	10.51	9.45	31.8	81.55	3.33	1.3	1.47	anthracite	50
NCS FC 28104	Coal	0.41	10.09	11	32.04	81.6	3.52	1.34	1.45	anthracite	50
NCS FC 28105	Coal	1.06	9.61	12.21	32.31	81.54	3.7	1.16	1.43	anthracite	50
NCS FC 28106	Coal	1.72	8.56	31.92	32.98	79.09	4.95	1.38	1.35	bitumite	50
NCS FC 28107	Coal	0.67	10.41	15.3	31.64	79.89	3.8	1.12	1.43	bitumite	50
NCS FC 28108	Coal	0.57	13.68	30.84	29.9	72.94	4.46	1.26	1.42	bitumite	50
NCS FC 28109	Coal	0.58	11.98	11.3	30.66	79.42	3.28	1.09	1.49	anthracite	50
NCS FC 28110	Coal	0.87	8.42	32.94	30.92	75.96	4.56	1.33	1.41	bitumite	50
NCS FC 28111	Coal	1.28	25.19	28.39	24.35	60.24	3.37	1.04	1.57	bitumite	50
NCS FC 28112	Coal	2.1	8.08	33.7	33.04	78.75	5.01	1.31	1.33	bitumite	50
NCS FC 28113	Coal	0.27	7.06	33.4	30.03	74.8	4.47	1.02	1.41	bitumite	50
NCS FC 28114	Coal	0.2	4.66	33.07	30.73	76.36	4.54	1.08	1.4	bitumite	50
NCS FC 28115	Coal	0.42	6.38	32.22	31.05	77.44	4.42	1.21	1.41	bitumite	50
NCS FC 28116	Coal	0.54	6.08	32.34	31.82	78.68	4.59	1.34	1.39	bitumite	50
NCS FC 28117	Coke	0.63	14.83	1.3	28.28						50
NCS FC 28118	Coke	0.87	12.08	1.66	29.25						50
NCS FC 28119	Coke	0.81	14.43	1.34	28.3						50
NCS FC 28120	Coke	0.68	14.05	1.43	28.55						50
NCS FC 28121	Coke	0.75	13.29	1.14	28.76						50
Number	Name	Chemical Composition(Percent)									Unit Size (in g)
		Si	Al	Fe	Ca	Mg	P	K	Na	Ti	
NCS FC 28122	Inorganic elements in Coal	0.47	0.25	1.79	0.85	0.24	0.0029	0.016	0.081	0.01	50
NCS FC 28123	Inorganic elements in Coal	1.86	1.88	0.35	0.74	0.081	0.066	0.026	0.11	0.096	50
NCS FC 28124	Inorganic elements in Coal	1.77	1.75	0.34	0.79	0.071	0.044	0.02	0.13	0.079	50
NCS FC 28125	Inorganic elements in Coal	2.69	2.27	0.24	0.28	0.05	0.013	0.09	0.048	0.09	50
NCS FC 28126	Inorganic elements in Coal	1.01	0.83	0.32	0.65	0.06	0.019	0.01	0.034	0.046	50
NCS FC 28127	Inorganic elements in Coal	5.61	3.47	1.02	1.88	0.28	0.01	0.29	0.052	0.018	50
NCS FC 28128	Inorganic elements in Coal	1.64	1.22	0.86	0.19	0.059	0.0044	0.043	0.026	0.059	50

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Number	Name	Chemical Composition(Percent)									Unit Size (in g)		
		V	Mn	Cu	Co	Ni	Zn	Cr	Cd	Pb			
NCS FC 28122	Inorganic elements in Coal	0.0001	0.022	0.0002	0.0008	0.0008		0.0002	<0.0001	0.0002		50	
NCS FC 28123	Inorganic elements in Coal	0.0012	0.003	0.0012	0.0004	0.0008	(0.001)	0.001	<0.0001	0.0016		50	
NCS FC 28124	Inorganic elements in Coal	0.0011	0.0016	0.0012	0.0004	0.0008		0.0007	<0.0001	0.0016		50	
NCS FC 28125	Inorganic elements in Coal	0.0033	0.0009	0.0017	0.0011	0.0018		0.0005	<0.0001	0.0016		50	
NCS FC 28126	Inorganic elements in Coal	0.0011	0.008	0.0008	0.0003	0.0005		0.0005		0.0002		50	
NCS FC 28127	Inorganic elements in Coal	0.006	0.019	0.0023	0.0009	0.0016	0.004	0.0023				50	
NCS FC 28128	Inorganic elements in Coal	0.0028	0.0026	0.0012	0.0004	0.0008	<0.001	0.0008				50	
Number	Name	Chemical Composition(Percent)											Unit Size (in g)
		Si	Al	Fe	Ca	Mg	P	K	Na	Ti	V	Mn	
NCS FC 28129	Element in coke	2.97	2.35	0.75	0.6	0.11	0.02	0.093	0.13	0.12	0.0041	0.021	50
NCS FC 28130	Element in coke	2.35	1.96	0.63	0.52	0.11	0.022	0.061	0.063	0.099	0.0034	0.015	50
NCS FC 28131	Element in coke	3.22	2.72	0.51	0.29	0.046	0.015	0.094	0.05	0.12	0.0027	0.008	50
Number	Name	Total Sulfur (%)	Ash (%)	Volatile (%)	Calorific (MJ/kg)	P (%)	Chemical Composition(Percent)					Unit Size (in g)	
							Cu	Co	Ni	Zn	Cr		Cd
NCS FC 28129	Element in coke	0.0021	0.0007	0.0015	0.0011	0.0015					0.0014		
NCS FC 28130	Element in coke	0.0017	0.0006	0.0012	0.0011	0.0012	<0.0001						
NCS FC 28131	Element in coke	0.0016	0.0007	0.0013	0.0018	0.0011	<0.0001						
Number	Name	Total Sulfur (%)	Ash (%)	Volatile (%)	Calorific (MJ/kg)	P (%)	Chemical Composition(Percent)					Unit Size (in g)	
NCS FC 28132	coke	0.50	11.39	2.80	30.23	0.016							50
NCS FC 28133	coke	1.00	12.30	1.79	29.18	0.024							50
NCS FC 28134	coke	1.19	12.70	1.95	29.04	0.024							50
Number	Name	Chemical Composition(Percent)											Unit Size (in g)
		SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	CaO	MgO	P ₂ O ₅	K ₂ O	Na ₂ O	TiO ₂	V ₂ O ₅	MnO	
NCS FC 28135	Ash of Coke	42.87	29.95	7.23	5.67	1.25	0.31	1.51	2.36	1.44	0.049	0.18	5
NCS FC 28136	Ash of Coke	41.61	30.666	7.51	6	1.5	0.41	1.22	1.36	1.41	0.05	0.16	5
NCS FC 28137	Ash of Coke	47.81	35.62	5.02	2.82	0.53	0.24	1.57	0.94	1.41	0.033	0.07	5
Number	Name	Total Sulfur (%)	Ash (%)	Volatile (%)	Calorific (MJ/kg)	Carbon (%)	Hydrogen (%)	Nitrogen (%)	TRUE Specific Gravity(20°C)"	Coal Type	Unit Size (in g)		
NCS FC 28138	Coal	1.42	44.23	11.11	18.59	47.12	2.48	0.75	1.79	anthracite	50		
NCS FC 28139	Coal	1.34	22.8	18.09	27.27	67.41	3.68	1.05	1.51	bitumite	50		
NCS FC 28140	Coal	1.29	25.88	30.31	22.71	58.12	3.4	1.04	1.62	bitumite	50		
NCS FC 28141	Coal	3.04	29.13	9.99	23.72	60.53	2.73	0.86	1.68	anthracite	50		
NCS FC 28142	Coal	4.54	34.45	12.38	22.18	55.14	2.79	0.85	1.71	bitumite	50		
NCS FC 28143	Coal	6.62	33.01	11.1	21.92	54.74	2.53	0.76	1.78	anthracite	50		
NCS FC 28144	Coal	1.56	73.37	9.44	6.77	18.01	1.45	0.28	2.29	coal waste rock	50		
Number	Name	Chemical Composition(Percent)											Unit Size (in g)
		SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	CaO	MgO	P ₂ O ₅	K ₂ O	Na ₂ O	TiO ₂	V ₂ O ₅	MnO	
NCS FC 28145	Coal ash	15.66	7.34	39.61	18.37	6.05	0.1	0.6	3.37	0.26	0.0042	0.44	5
NCS FC 28146	Coal ash	37.86	33.71	4.74	9.9	1.27	1.44	0.6	2.9	1.56	0.02	0.037	5
NCS FC 28147	Coal ash	37.52	32.78	4.81	10.97	1.17	1	0.48	3.5	1.34	0.019	0.02	5
NCS FC 28148	Coal ash	48.03	35.8	2.81	3.27	0.69	0.25	1.81	1.08	1.29	0.049	0.0073	5
NCS FC 28149	Coal ash	35.54	25.92	7.56	14.92	1.63	0.72	0.39	1.51	1.3	0.032	0.017	5
NCS FC 28150	Coal ash	47.64	26.03	5.79	10.44	1.87	0.091	2.81	0.56	1.24	0.042	0.097	5
NCS FC 28151	Coal ash	43.42	28.53	15.18	3.33	1.21	0.12	1.29	0.87	1.25	0.062	0.042	5
Number	Name	Chemical Composition(Percent)										Unit Size (in g)	
		SiO ₂	CaO	MgO	Al ₂ O ₃	Fe ₂ O ₃	SO ₃	TiO ₂	K ₂ O	Na ₂ O	P ₂ O ₅		
NCS FC28038	Coal Ash	21.22	15.69	5.09	10.72	35.34	7.46	0.44	0.22	1.84	0.16	20	
NCS FC28039	Coal Ash	52.6	8.04	1.16	27.37	7.43	0.46	0.76	0.83	0.28	0.32	20	
NCS FC28040	Coal Ash	56.22	8.6	1.4	20.88	8.7	0.51	0.66	1.25	0.52	0.36	20	
NCS FC28041	Coal Ash	45.42	7.2	1.15	35.96	5.15	0.08*	1.32	0.7	0.82	0.89	20	
Number	Name	Chemical Composition(Percent)					Unit Size (in g)						
		P (%)	Cl (%)	As (µg/g)	F (µg/g)	Hg (µg/g)							
NCS FC28042	P, As, F, Cl, Hg in Coal	0.013	0.043	10	256	0.25	50g						
NCS FC28043	P, As, F, Cl, Hg in Coal	0.008	0.051	22	158	0.03	50g						
NCS FC28044	P, As, F, Cl, Hg in Coal	0.121	0.038	1.4	232	0.08	50g						
NCS FC28045	P, As, F, Cl, Hg in Coal	0.055	0.052	6.4	179	0.36	50g						

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Number	Name	Si	Al	Fe	Ca	Chemical Composition(Percent)							Unit Size (in g)	
NCS FC 28152	Element of Coal waste rock	20.59	10.76	2.57	0.34	0.53	0.026	1.27	0.15	0.012	0.023	0.44	50	
Number	Name	SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	CaO	MgO	P ₂ O ₅	K ₂ O	Na ₂ O	TiO ₂	V ₂ O ₅	MnO	Unit Size (in g)	
NCS FC 28153	Ash of Coal waste rock	60.03	27.71	5.01	0.65	1.2	0.082	4.18	0.53	1.04	0.028	0.041	5	
Number	Name	St.d	Ad	Vd	Q _{gr,d} (MJ/kg)	Coal Type		Unit Size (in g)						
NCS FC 28201	Coal	0.47	10.45	17.7	31.57	bitumite		50						
NCS FC 28202	Coal	1.05	8.65	33.36	30.77	bitumite		50						
NCS FC 28203	Coal	0.71	10.36	20.69	31.66	bitumite		50						
NCS FC 28204	Coal	0.96	8.09	34.25	31.34	bitumite		50						
NCS FC 28205	Coal	0.31	14.49	11.39	29.98	anthracite		50						
NCS FC 28206	Coal	0.86	14.42	28.56	26.73	bitumite		50						
NCS FC 28207	Coal	0.43	16.26	7.26	26.1	anthracite		50						
NCS FC 28208	Coal	1.03	15.48	20.57	29.19	bitumite		50						
NCS FC 28209	Coal	1.76	27.33	8.21	23.96	anthracite		50						
NCS FC 28210	Coal	3.17	25.9	8.40	24.47	anthracite		50						
NCS FC 28211	Coal	0.88	13.41	9.08	30.23	anthracite		50						
NCS FC 28212	Coal	0.53	8.52	25.65	30.94	bitumite		50						
NCS FC 28213	Coal	1.49	9.88	36.2	30.76	bitumite		50						
NCS FC 28214	Coal	1.66	27.85	29.21	23.63	bitumite		50						
NCS FC 28215	Coal	2.17	25.2	28.79	24.83	bitumite		50						
NCS FC 28216	Coal	2.79	8.7	10.78	32.34	anthracite		50						
NCS FC 28217	Coal	1.79	8.68	36.06	31.33	bitumite		50						
NCS FC 28218	Coal	1.35	14.58	6.16	29.26	anthracite		50						
NCS FC 28219	Coal	0.28	6.1	31.24	30.09	bitumite		50						
NCS FC 28220	Coal	4.03	16.52	11.15	28.67	anthracite		50						
NCS FC 28221	Coal	4.04	18.98	32	27.79	bitumite		50						
Number	Name	SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	CaO	MgO	P ₂ O ₅	K ₂ O	Na ₂ O	TiO ₂	V ₂ O ₅	MnO	SO ₃	Unit Size (in g)
NCS FC 28154	Ash of Coal	53.17	32.02	6.47	2.28	0.9	0.19	1.37	0.41	1.34	0.027	0.035	0.78	5
Number	Name	Fusibility(°C) Atmosphere		Deformation temperature	Softening temperature	Hemisphere temperature	Fluid temperature	Unit size						
NCS FS28001	Fusibility of Coal Ash	Mildly reducing atmosphere	Certified Value	1161	1190	1198	1204	5g						
		Oxidizing atmosphere	Certified Value	1211	1230	1239	1252							
NCS FS28002	Fusibility of Coal Ash	Mildly reducing atmosphere	Certified Value	1217	1340	1357	1369							
		Oxidizing atmosphere	Certified Value	1356	1408	1420	1445							
NCS FS28003	Fusibility of Coal Ash	Mildly reducing atmosphere	Certified Value	1285	1314	1322	1340							
		Oxidizing atmosphere	Certified Value	1314	1345	1360	1381							
Number	Name	Fusibility(°C) Atmosphere		Deformation temperature	Softening temperature	Hemisphere temperature	Fluid temperature	Unit size						
NCS FS 91001c	Fusibility of coal ash	Mildly reducing atmosphere	Certified Value	1147	1219	1251	1305	30g						
		Oxidizing atmosphere	Certified Value	1321	1345	1358	1376							
		Strong reducing atmosphere	Certified Value	1376	1407	1427	1464							

Section 9 Coal(Powder)

Number	Name	Total Sulfur (%)	Ash (%)	Volatile matter(%)	Calorific Value (MJ/kg)	Carbon (%)	Hydrogen (%)	Nitrogen (%)	True Specific Gravity (20°C)	Unit Size (in g)	
NCS FC 28155	Coal	1.93	10.8	10.53	31.14	79.7	3.35	1.14	1.46	50	
NCS FC 28156	Coal	3.85	13.1	10.19	29.85	76.21	3.23	0.88	1.48	50	
NCS FC 28157	Coal	1.54	11.1	9.32	31.05	79.89	3.33	1.21	1.47	50	
NCS FC 28158	Coal	0.45	21.77	7.47	26.76	70.73	2.51	0.87	1.66	50	
NCS FC 28159	Coal	0.28	21.04	10.57	25.8	69.88	2.33	0.84	1.68	50	
NCS FC 28160	Coal	1.3	8.93	8.94	31.99	82.3	3.35	1.24	1.45	50	
NCS FC 28161	Coal	0.51	12.58	8.87	31.02	79.77	3.29	1.03	1.47	50	
NCS FC 28162	Coal	2.5	13.9	11.12	29.8	76.3	3.31	1.07	1.49	50	
NCS FC 28163	Coal	0.87	10.82	9.22	31.45	80.79	3.35	1.15	1.46	50	
NCS FC 28164	Pitch Coke	0.26	0.17	1.17					1.97	50	
NCS FC 28165	Petroleum Coke	2.6	0.37	1.01					2.06	50	
NCS FC 28166	Petroleum Coke	1.05	0.3	19.64					1.31	50	
NCS FC 28167	Petroleum Coke	1.75	0.35	9.11					1.36	50	
NCS FC 28168	Petroleum Coke	1.46	0.33	13.59					1.33	50	
Number	Name	Total Sulfur St,d	Organic Sulfur So,d	Sulphates Sulfur Ss,d	Pyrites Sulfur Sp,d					Unit Size (in g)	
NCS FC 28169	Forms of Sulfur in Coal	0.19	0.18		0.011					50	
NCS FC 28170	Forms of Sulfur in Coal	1.64	0.79	0.37	0.48					50	
NCS FC 28171	Forms of Sulfur in Coal	1.34	0.36	0.29	0.69					50	
Number	Name	Caking index								Unit Size (in g)	
NCS FC82026b	Caking index for bituminous Coal	15								25	
NCS FC82027c	Caking index for bituminous Coal	25								25	
NCS FC82028c	Caking index for bituminous Coal	84								25	
NCS FC82029c	Caking index for bituminous Coal	90								25	
Number	Name	F (µg/g)	Cl (%)	As (µg/g)	Hg (µg/g)	P (%)					Unit Size (in g)
NCS FC28172	Harmful elements in Coal	72	0.013	1.2	<0.10	0.003					50
NCS FC28173	Harmful elements in Coal	180	0.043	5.3	0.42	0.015					50
NCS FC28174	Harmful elements in Coal	90	0.027	1.5	<0.10	0.013					50
NCS FC28175	Harmful elements in Coal	157	0.011	1.4	0.16	0.055					50
NCS FC28176	Harmful elements in Coal	122	0.046	2.6	0.23	0.028					50