



ACIRS Product Catalogue August 2021

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Australian Coal Industry Reference Samples (ACIRS)
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ACIRS COAL MATRIX REFERENCE MATERIALS

- * General Coal RMs: ACIRS-G9-2021
- * Sulfur RMs: ACIRS-S2A-2020, ACIRS-S2B-2015 and ACIRS-S2D-2016
- * Trace Elements in Coal RMs: ACIRS-M1-2014-Lot#2 and ACIRS-M2-2018

Parameter	ACIRS-G9	ACIRS-M1-Lot#2	ACIRS-M2	ACIRS-S2A	ACIRS-S2B	ACIRS-S2D
Ash, % d	10.69	18.68	9.32			
Total Sulfur, % d	0.601	2.39		0.43	0.69	2.88
Chlorine, % d	0.056	0.014			0.027	0.010
Phosphorus, % d	0.036	0.098				
Relative Density, d	1.386	1.417				
Fluorine, mg/kg d	100	160	176		37	
Mercury, mg/kg d	0.030	0.122	0.041		0.057	0.281
Volatile Matter, % d	20.00					
Gross Calorific Value, MJ/kg d	32.105					
Total Carbon, % d	79.07					
Hydrogen, % d	4.31					
Nitrogen, % d	1.79					
Carbonate Carbon, % d	0.063					
Selenium, mg/kg d		1.5	0.3(indicative)			
Arsenic, mg/kg d		3.9	0.3			
Cadmium, mg/kg d		0.04*	0.02*			

* = indicative

ACIRS-G9-2021 (125 g)
 ACIRS-M1-2014-Lot#2 (125 g)
 ACIRS-S2A-2020 (125 g)
 ACIRS-S2B-2015 and ACIRS-S2D-2016 (125 g)
 ACIRS-M2-2018 (50g)

Price*: \$230.00
 Price*: \$200.00
 Price*: \$200.00
 Price*: \$180.00
 Price: \$125.00

* AUD excluding delivery costs and GST

ACIRS-FLY ASH REFERENCE MATERIAL*** ACIRS-A1-2016**

ACIRS-A1-2016			
Ash Analysis Parameters		Ash Fusibility Parameters	
SiO ₂ wt%, d	44.1	Reducing Temperatures °C	
Al ₂ O ₃ wt%, d	28.9	Deformation	1257
Fe ₂ O ₃ wt%, d	14.6	Spherical	1287
CaO wt%, d	6.05	Hemispherical	1309
MgO wt%, d	1.25	Flow	1367
Na ₂ O wt%, d	0.43	Oxidising Temperatures °C	
K ₂ O wt%, d	0.46	Deformation	1349
P ₂ O ₅ wt%, d	1.26	Spherical	1383
TiO ₂ wt%, d	1.56	Hemispherical	1398
Mn ₃ O ₄ wt%, d	0.22	Flow	1429
BaO wt%, d	0.183		
SrO wt%, d	0.16		
SO ₃ wt%, d	0.32		
Indicative Parameters			
Co mg/kg, d	43	Pb mg/kg, d	47
Cr mg/kg, d	58	V mg/kg, d	176
Cu mg/kg, d	99	Zn mg/kg, d	90
Ni mg/kg, d	47		

ACIRS-HARDGROVE GRINDABILITY REFERENCE MATERIAL*** ACIRS-H8-2021**

Set of 4 x1 kg samples

ACIRS-H8-2021	
Hardgrove Grindability Index	
Sample A	27
Sample B	44
Sample C	59
Sample D	83

Other ACIRS products*** ACIRS-ELECTRODE CARBON: ACIRS-EC-2011**

ACIRS-EC-2011 is a 1 kg jar of inert electrode carbon material intended for use in the Gray-King Coke Type test as described in AS 1038.12.2 and ISO 502

ACIRS-EC-2011			
Moisture, %	0.2	Size Distribution	Mass, %
Ash, % d	2.8	+212 µm	0.2
Volatile Matter, % d	0.8	-212 +125 µm	12.2
Relative Density, d	2.08	-125 +63 µm	25.4
		-63 µm	62.2

ACIRS-A1-2016 (80 g)

Price*: \$200.00

ACIRS-H8-2021 (4 x 1kg)

Price*: \$715.00

ACIRS-EC-2011 (1 kg)

Price*: 150.00

* AUD excluding delivery costs and GST