

ACIRS Product Catalogue

July 2026

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WHAT'S NEW FROM ACIRS?

LATEST RELEASES

ACIRS-G11-2026

ACIRS-M2-2018 (*additional trace elements*)

ACIRS-S2D-2016 (*additional trace elements*)

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

GENERAL COAL REFERENCE MATERIAL

ACIRS-G11-2026 (125 g sample)

SULFUR CERTIFIED REFERENCE MATERIALS

ACIRS-S2A-2020 (125 g sample)

ACIRS-S2B-2015 (125 g sample)

ACIRS-S2C-2023 (125 g sample)

ACIRS-S2D-2016 (125 g sample)

TRACE ELEMENTS IN COAL REFERENCE MATERIAL

ACIRS-M2-2018 (50 g sample)

Values in parentheses () indicate informational values only.

*ACIRS-S2A-2020 and ACIRS-S2B-2015 were characterised before
ACIRS' ISO 17034 NATA accreditation.*

Parameter	General Coal RM	Sulfur Certified RMs					Trace Elements in Coal RM
	ACIRS-G11 2026	ACIRS-S2A 2020	ACIRS-S2B 2015	ACIRS-S2C 2023	ACIRS-S2D 2016	ACIRS-M2- 2018	
Ash, % d	10.45	-	-	15.10	17.81	9.32	
Total Sulfur, % d	0.602	0.433	0.692	1.230	2.877	0.343	
Chlorine, % d	0.057	-	0.027	0.0086	0.0092	0.0311	
Phosphorus, % d	0.0169	-	-	0.0352	0.0074	0.1135	
Fluorine, mg/kg d	64	-	37	94	97	176	
Mercury, mg/kg d	(0.026)	-	0.057	0.111	0.281	0.041	
Relative Density, d	1.380	-	-	-	-	-	
Volatile Matter, % d	19.73	-	-	-	-	-	
Gross Calorific Value, MJ/kg d	32.234	-	-	-	-	-	
Total Carbon, % d	79.51	-	-	-	-	-	
Hydrogen, % d	4.380	-	-	-	-	-	
Nitrogen, % d	1.763	-	-	-	-	-	
Carbonate Carbon, % d	(0.033)	-	-	-	-	-	
Pyritic Sulfur, % d	(0.036)	-	-	-	-	-	
Sulfate Sulfur, % d	(0.022)	-	-	-	-	-	
Antimony, mg/kg d	(0.26)	-	-	-	0.167	0.188	
Arsenic, mg/kg d	(0.43)	-	-	-	(4.15)	0.302	
Barium, mg/kg d	-	-	-	-	93.3	46.3	
Boron, mg/kg d	(3.9)	-	-	-	41.5	3.47	
Cadmium, mg/kg d	(0.034)	-	-	-	0.090	0.024	
Chromium, mg/kg d	-	-	-	-	(19.6)	(12.4)	
Cobalt, mg/kg d	-	-	-	-	4.59	3.60	
Copper, mg/kg d	-	-	-	-	26.7	13.5	
Lead, mg/kg d	-	-	-	-	6.42	5.46	
Lithium, mg/kg d	-	-	-	-	(14.3)	(34.2)	
Manganese, mg/kg d	-	-	-	-	50.7	53.4	
Molybdenum, mg/kg d	-	-	-	-	(1.01)	(0.410)	
Nickel, mg/kg d	-	-	-	-	12.4	8.80	
Selenium, mg/kg d	0.75	-	-	-	1.77	0.307	
Strontium, mg/kg d	-	-	-	-	38.0	181	
Vanadium, mg/kg d	-	-	-	-	41.2	23.1	
Zinc, mg/kg d	-	-	-	-	33.2	7.93	

ACIRS COAL ASH REFERENCE MATERIAL**ACIRS-A2-2024**

(75 g sample)

ACIRS-A2-2024			
Ash Analysis Parameters		Ash Fusibility Parameters	
SiO ₂ wt%, d	58.0	Reducing Temperatures °C	
Al ₂ O ₃ wt%, d	26.0	Deformation	1310
Fe ₂ O ₃ wt%, d	8.8	Spherical	1370
CaO wt%, d	2.61	Hemispherical	1400
MgO wt%, d	1.03	Flow	1480
Na ₂ O wt%, d	0.36	Oxidising Temperatures °C	
K ₂ O wt%, d	0.90	Deformation	1430
TiO ₂ wt%, d	1.42	Spherical	1460
Mn ₃ O ₄ wt%, d	0.12	Hemispherical	1480
P ₂ O ₅ wt%, d	0.55	Flow	1520
SO ₃ wt%, d	0.13		
*SrO wt%, d	0.04	*Parameters not included in ACIRS' NATA scope of accreditation.	
*BaO wt%, d	0.05		
*ZnO wt%, d	0.01		

ACIRS HARDGROVE GRINDABILITY INDEX**CERTIFIED REFERENCE MATERIAL****ACIRS-H11-2026-Lot#1**

(Set of 4 x 1 kg samples)

ACIRS-H11-2026-Lot#1	
	Hardgrove Grindability Index
Sample A	27
Sample B	45
Sample C	64
Sample D	86

PRICE LIST

Product	Size	Price
ACIRS-G11-2026	125 g	\$270.00
ACIRS-S2A-2020	125 g	\$200.00
ACIRS-S2B-2015	125 g	\$200.00
ACIRS-S2C-2023	125 g	\$300.00
ACIRS-S2D-2016	125 g	\$340.00
ACIRS-M2-2018	50 g	\$250.00
ACIRS-A2-2024	75 g	\$250.00
ACIRS-H11-2026-Lot#1	4 x 1 kg	\$1,095.00

Price in AUD excluding GST and delivery costs.