

# ACIRS-G6-2014

## PRODUCT INFORMATION LEAFLET

General Coal Reference Material intended to be used for quality control purposes

Higher rank bituminous coal, 125 g at a nominal top size of -212 µm

	Property Values <sup>1</sup>	Standard Deviation <sup>2</sup>	Uncertainty <sup>3</sup>	Number of laboratories
Ash, % d <sup>1a</sup>	10.72	0.060	0.012	38
Volatile Matter, % d <sup>1b</sup>	19.93	0.291	0.059	38
Gross Calorific Value, MJ/kg d	32.150	0.0830	0.0092	127
Relative Density, d <sup>1c</sup>	1.372	0.0160	0.0053	14
Total Carbon, % d	79.36	0.738	0.114	65
Hydrogen, % d	4.33	0.113	0.018	64
Nitrogen, % d	1.75	0.064	0.010	60
Total Sulfur, % d	0.59	0.022	0.002	148
Pyritic Sulfur, % d	0.05	0.021	0.006	22
Sulfate Sulfur, % d	0.01	0.008	0.002	18
Chlorine, % d	0.041	0.0054	0.0009	57
Phosphorus, % d	0.022	0.001	<0.001	16
Carbonate Carbon, % d <sup>1d</sup>	0.055	0.0061	0.0031	6
Fluorine, mg/kg d	67	6.3	1.4	30
Mercury, mg/kg d	0.026	0.0059	0.0011	44
Selenium, mg/kg d	0.8	0.17	0.05	16

This sample should be thoroughly mixed by end-over-end rotation before sub-sampling. To minimise the risk of compositional changes due to oxidation store in a cool, dark place in original containers with the lid tightly sealed.

The full technical report and Safety Data Sheet for this product are available at [www.acirs.com.au/products/general-coal-reference-material/](http://www.acirs.com.au/products/general-coal-reference-material/)

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## NOTES

1 Property values are the best estimate of the true value for the measurand and are based on the robust mean of participant results (outliers excluded) from proficiency test programs conducted by CANSPEX and Proficiency Testing Australia. Unless otherwise specified, parameters have been assigned from results of multiple analysis methods. Biases between methods were not observed. Further information can be obtained from the full technical report available at [www.acirs.com.au/products/general-coal-reference-material/](http://www.acirs.com.au/products/general-coal-reference-material/)

- 1a Ash certified by ISO 1171 and equivalent methods
- 1b Volatile Matter certified by ISO 562 and equivalent methods
- 1c Relative Density certified by AS1038.21.1.1/1038.21.1.2
- 1d Carbonate carbon certified by AS 1038.23.

2 Standard deviation (sd) is used to derive the likely range of results - the value for a measurand from a randomly chosen laboratory would be expected to lie within 2 sd of property values with 95% probability.

3 The uncertainty of this value has been calculated from  $sd/\sqrt{n}$  where n= number of laboratories.

4 Property values for coal samples are subject to change due to the normal oxidation processes for coals. For this reason, oxidation sensitive parameters i.e. calorific value, volatile matter, carbon, hydrogen and forms of sulfur are considered stable until at least August 2017. All other parameters are considered stable until August 2019.

It is the responsibility of the user to obtain the most recent Technical Report and Product Information Leaflet for this reference material available at [www.acirs.com.au/products/general-coal-reference-material/](http://www.acirs.com.au/products/general-coal-reference-material/)

To the extent permitted by law, ACIRS disclaims all warranties whether expressed or implied with regard to merchantability, non-infringement, or fitness for a particular purpose. In no event will ACIRS be liable for incidental damage or consequential loss arising from the use of this product.

Where the product does not conform to assigned property values, giving due consideration to the stated uncertainties and accepted tolerances, the total liability of ACIRS shall be limited at ACIRS' absolute discretion to either replacement of the product or refund of the purchase price.

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### Revision History

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ACIRS-G6-COA-rev0	Original (rev0)	03/12/2014
ACIRS-G6-COA-rev01	Format changes	19/05/2015
ACIRS-G6-COA-rev02	Updated period of validity	28/06/2017