AS 1038.26—2005

Australian Standard™

Coal and coke—Analysis and testing

Part 26: Higher rank coal and coke—Guide for the determination of apparent relative density

STANDARDS AUSTRALIA

This Australian Standard was prepared by Committee MN-001, Coal and Coke. It was approved on behalf of the Council of Standards Australia on 21 April 2005. This Standard was published on 14 June 2005.

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Australian Building Codes Board
Australian Coal Association
Australian Coal Preparation Society
Australian Institute of Energy
Coalfield Geology Council of N.S.W.
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PREFACE

This Guide was prepared by the Standards Australia Committee MN-001, Coal and Coke, to supersede AS 1038.21.2—1992, *Coal and coke—Analysis and testing*, Part 21.2: *Higher rank coal and coke—Relative density—Lump sample*.

The objective of this Guide is to provide coal industry geologists and analytical laboratories with guidelines for determining the apparent relative density of bulk samples of coal and coke. The method described is useful for the evaluation of borecore samples.

The objective of this revision is to change the terminology from 'relative density/lump sample' to the term 'apparent relative density', the deletion of the paraffin wax film method and some editorial updates.

In reporting information supplied using this test method reference should be made to the following ACARP project papers:

C10042 Estimation of in-situ density from apparent relative density and relative density analyses

C10041 Estimation of in-situ and product total moisture.

These papers may provide additional information in regard to use of these values.

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1 SCOPE

This Guide describes a method for the determination of the apparent relative density of bulk samples of coal and a method for coke.

NOTE: Care should be taken when expressing results using this method as the moisture condition of the sample at the time of analysis may be variable due to preparation and handling conditions and be different to the moisture basis determined for other parameters.

The methods are as follows:

(a) *Coal* This method is applicable to porous coals and single-lump samples that do not break down in water, and for coals that do not absorb water to a significant extent under the conditions of the test.

(b) *Coke* The drainage method is used to take into account the difficulties in the determination of the apparent relative density of coke due to water draining out of large pores after immersion in water. This may be overcome by limiting the drainage period to a minimum of 10 s.

2 REFERENCED DOCUMENTS

The following documents are referred to in this Guide:

AS

2243 Safety in laboratories (series)

2418 Coal and coke—Glossary of terms

2706 Numerical values—Rounding and interpretation of limiting values

3 DEFINITIONS

For the purposes of this Guide, the definitions given in AS 2418 apply.

4 PRINCIPLE

The mass of water displaced by the lump coal is determined by weighing the sample in air and in water.

5 SAFETY

For information on laboratory safety, reference should be made to the relevant parts of AS 2243.