

Australian Standard™

Coal and coke—Analysis and testing

**Part 12.1: Higher rank coal—
Caking and coking properties—
Crucible swelling number**



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 15 February 2002 and published on 19 March 2002.

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Australasian Institute of Mining and Metallurgy
Australian Coal Association
Australian Coal Preparation Society
Australian Institute of Energy
Bureau of Steel Manufacturers of Australia
CSIRO Division of Energy Technology
Coalfield Geology Council of N.S.W.
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**Part 12.1: Higher rank coal—
Caking and coking properties—
Crucible swelling number**

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PREFACE

This Standard was prepared by the Standards Australia Committee MN-001, Coal and Coke, to supersede AS 1038.12.1—1993, *Coal and coke—Analysis and testing*, Part 12.1: *Higher rank coal—Caking and coking properties — Crucible swelling number*.

This Standard is one of a series of Standards for assessing caking and coking properties of coal. The other parts of this Standard are as follows:

AS

1038	Coal and coke—Analysis and testing
1038.12.2	Part 12.2: Higher rank coal—Caking and coking properties— Determination of Gray-King coke type
1038.12.3	Part 12.3: Higher rank coal—Caking and coking properties—Dilatation
1038.12.4.1	Part 12.4.1: Higher rank coal—Caking and coking properties—Plasticity— Continuous-torque Gieseler method
1038.12.4.2	Part 12.4.2: Higher rank coal—Caking and coking properties—Plasticity— Discontinuous-torque Gieseler method

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STANDARDS AUSTRALIA

Australian Standard
Coal and coke—Analysis and testing**Part 12.1: Higher rank coal—Caking and coking properties—
Crucible swelling number****1 SCOPE**

This Standard sets out a method for determining the crucible swelling number of coal by heating the coal in a covered crucible.

2 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS

- | | |
|---------|--|
| 1038 | Coal and coke—Analysis and testing |
| 1038.16 | Part 16: Assessment and reporting of results |
| 2243 | Safety in laboratories (series) |
| 2418 | Coal and coke—Glossary of terms |
| 2508 | Safe storage and handling information cards |
| 4264 | Coal and coke—Sampling |
| 4264.1 | Part 1: Higher rank coal—Sampling procedures |

3 DEFINITIONS

For the purpose of this Standard, the definitions given in AS 2418 apply.

4 PRINCIPLE

Known mass of coal is heated in a covered crucible under standard conditions and the coke button obtained is classified by comparison with the outlines of a standard set of profiles.

The number of the standard profile most closely corresponding to the largest profile of this coke button is the crucible swelling number.

Gas heating equipment is specified. Electrical heating apparatus may be used only if it can be shown that the swelling numbers obtained agree with those obtained by the gas heating method.

5 SAFETY

For information on laboratory safety, reference should be made to the relevant parts of AS 2243 and AS 2508.

6 REAGENTS**6.1 General**

Unless otherwise specified, all reagents shall be of analytical reagent grade.