AS 4350.1—2005

Australian Standard™

Heavy mineral sand concentrates—Physical testing

Part 1: Size analysis

This Australian Standard was prepared by Committee MN-004, Heavy Mineral Sands. It was approved on behalf of the Council of Standards Australia on 19 August 2005.
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The following are represented on Committee MN-004:

Australasian Institute of Mining and Metallurgy
Chamber of Minerals and Energy of Western Australia

Additional Interests:

Producers of heavy mineral sand concentrates

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Part 1: Size analysis

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PREFACE

This Standard was prepared by the Standards Australia Committee MN-004, Heavy Mineral Sands, to supersede AS 4350.1—1995, *Heavy mineral sand concentrates—Physical testing*, Part 1: *Size analysis*. This revision includes more detail on the test portion used in the analysis and incorporates in an Appendix the procedure for calculating the American Foundrymen's Society number.

The objective of this Standard is to provide those responsible for size analysis of heavy mineral sand concentrates with a standardized procedure that should ensure consistent results.

The terms 'normative' and 'informative' have been used in this Standard to define the application of the appendix to which they apply. A 'normative' appendix is an integral part of a Standard, whereas an 'informative' appendix is only for information and guidance.

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STANDARDS AUSTRALIA

Australian Standard
Heavy mineral sand concentrates—Physical testing

Part 1: Size analysis

1 SCOPE

This Standard sets out a method for determining the size distribution of free-flowing heavy mineral sand concentrates such as rutile, zircon, ilmenite and monazite.

The complete sizing analysis requires the removal of clay and fines prior to sizing. The removal of clay and fines is usually carried out by wet screening. However, mineral sand concentrates are substantially free of clays and fines and hence this step is omitted.

This Standard includes, in Appendix B, the method of calculating the American Foundrymen's Society Number (AFS number).

2 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS	
1152	Specification for test sieves
2706	Numerical values—Rounding and interpretation of limiting values
2884	Heavy mineral sand concentrates—Sampling
2884.3	Part 3: Preparation of samples
ISO	
565	Test sieves—Metal wire cloth, perforated metal plate and electroformed sheet—Nominal sizes of openings

3 APPARATUS

3.1 Test sieves

Complying with AS 1152 or ISO 565.

3.2 Balance

Accurate and readable to the nearest 0.01 g.

3.3 Mechanical sieve shaker

A rotating, tapping mechanical sieve shaker. A vibrating-type sieve shaker or manual shaking may be used, provided that it can be demonstrated that results are equivalent to the rotating, tapping-type shaker.

3.4 Brush

A soft brush for brushing the underside of the sieves.

4 SAMPLING

Samples shall be prepared in accordance with AS 2884.3.