

Australian/New Zealand Standard™

Portable fire extinguishers

Part 5: Specific requirements for powder type extinguishers

1 SCOPE

This Standard specifies requirements for portable rechargeable fire extinguishers of the powder type.

2 APPLICATION

Portable, rechargeable, powder fire extinguishers shall comply with AS/NZS 1841.1 and the requirements of this Standard.

Where requirements differ, this Standard shall take precedence.

3 REFERENCED DOCUMENTS

The following document is referred to in this Standard:

AS/NZS

1841 Portable fire extinguishers

1841.1 Part 1: General requirements

4 EXTINGUISHANT

The powder extinguishant shall retain its free-flowing properties at all times and have a moisture content not exceeding 0.25%.

5 POWDER COMPACTION TESTING

5.1 General

Every extinguisher size, design and powder type combination shall be subjected to the powder compaction test, as set out in Clauses 5.2 and 5.3.

5.2 Initial

A minimum of three extinguishers of each combination shall be correctly charged and each extinguisher shall, in turn, be held in the vertical position and dropped 500 times from a height of 15 mm at a rate of 1 Hz onto a rigid horizontal steel plate having dimensions greater than those of the extinguisher base.

Any non-metallic skirt or foot ring shall be removed prior to compaction.

5.3 Bonding

All the specimen extinguishers shall be stored at ambient temperature for not less than 90 days without being disturbed.

Prior to the extinguishers being discharged, they shall be stored at a temperature of 10°C to 25°C for not less than 24 h.

5.4 Discharge after compaction

At the completion of the bonding period, the testing authority shall select three of the bonded extinguishers and weigh and record their mass prior to the extinguishers being discharged.

The discharge time shall be determined as 125% of the effective discharge time, established in accordance with Clause 5.3.1 of AS/NZS 1841.1, for an uncompacted extinguisher. Where a discharge time is not determined, but measured in accordance with Clause 5.3.2 of AS/NZS 1841.1, then the discharge time shall be 125% of the minimum required discharge time, in accordance with Clause 5.3.1 of AS/NZS 1841.1, for that extinguisher. The test extinguishers shall be discharged for this time in the normal operating mode in their designed configuration. Care shall be taken not to disturb the compacted contents before or during the discharge of the extinguisher.

The discharged extinguishers shall be reweighed and the results recorded before proceeding to completely empty the residual powder from the body of each extinguisher. The extinguishers in their empty state shall be weighed again and the results recorded.

Calculations shall be performed to ascertain the percentage of contents discharged.

5.5 Acceptance criteria

At least two of the three extinguishers selected shall have discharged not less than 85% of their contents.

6 MARKING

In addition to the requirements of AS/NZS 1841.1, every powder-type extinguisher shall be marked with the following:

- (a) The word 'POWDER'.
- (b) The size, in terms of the mass powder, in kilograms.

NOTES

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The following are represented on Committee FP-003:

Association of Accredited Certification Bodies
Australasian Fire Authorities Council
Australian Building Codes Board
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Fire Protection Association Australia
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Standards New Zealand, Private Bag 2439, Wellington 6020

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