



Technical Advisory Note

TAN-09

Lithium-ion Batteries: Portable Fire Extinguishers and Fire Blankets

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Document History

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1.0	Approved	Initial version.	July 2022	FPA Australia
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3.0	Approved	Updated, and inclusion of fire blankets.	October 2025	FPA Australia

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Purpose

The purpose of this Technical Advisory Note is to provide clarity on the regulatory and standards framework in Australia as it relates to portable fire extinguishers and fire blankets marketed for use on lithium-ion battery fires.

By doing so, this Technical Advisory Note aims to ensure that stakeholders are aware of the regulatory framework, the limitations of current standards and the potential risks of relying on unverified claims about lithium-ion battery fire extinguishers and fire blankets.

Note: This document focuses only on lithium-ion batteries (not lithium metal, which is covered under FM Standards) and on portable products typically found in homes, offices, caravans, boats, and similar environments – including items such as phones, e-cigarettes, e-bikes/scooters, and portable tools.

Audience

This Technical Advisory Note is intended for:

- FPA Australia members
- Service providers
- Certifying bodies and certifiers
- Commercial and end users
- Stakeholders – resellers and manufacturers.

Overview

Lithium-ion batteries are increasingly common in everyday items such as phones, e-bikes, scooters, tools, caravans and household appliances. While their use continues to grow, so too does the number of fire incidents linked to lithium-ion batteries, often caused by factors such as manufacturing faults, accidents, design defects, charger issues and incorrect use.

This increase in incidents has led to a growing number of products being marketed or described as suitable for use on lithium-ion battery fires. However, in the absence of defined testing or regulatory standards specific to lithium-ion battery fires, users and suppliers alike may face uncertainty about the suitability and compliance of these products. This Technical Advisory Note clarifies the current framework and highlights the limitations of existing Australian Standards in this area.

At present, there are no Australian Standards available for fire extinguishers or fire blankets specifically designed for mitigating risks posed by lithium-ion batteries.

ACCC Mandatory Standards

Mandatory Australian Standards are established under federal law, enforced by the Australian Competition and Consumer Commission (ACCC), and must be complied with by businesses. A standard becomes mandatory when unsafe products could pose a serious risk of harm, for example, child car seats, electrical plugs, and fire extinguishers. Businesses that fail to meet the requirements of a mandatory standard risk fines, product recalls, or prosecution. By contrast, a voluntary Australian Standard is not legally required. Instead, it sets out recognised best practice for safety, quality, and performance, which many businesses choose to adopt to demonstrate reliability and reduce risk.

The relevant mandatory standard for fire extinguishers is the *Consumer Goods (Portable Non-aerosol Fire Extinguishers) Safety Standard 2021*. This requires extinguishers to be manufactured, fire rated and tested in line with AS/NZS 1841-2007 Parts 1-8, with modifications to Part 1, 3, 6 and 8. The mandatory standard ensures extinguishers are tested for performance and carry the correct identification so they can be relied on in a fire.

Compliance with AS/NZS 1841-2007 involves meeting the relevant classification and performance requirements of AS/NZS 1850-2009, AS/NZS 1841-2007 requires extinguishers to have a minimum rating determined by AS/NZS 1850-2009 fire tests. While AS/NZS 1850-2009 is not listed as a separate mandatory standard under the ACCC safety standard, its requirements apply through their inclusion in AS/NZS 1841-2007.

These requirements help maintain important consumer protections so Australians can have confidence in the safety of extinguishers and access clear product information. The safety standard commenced on 21 December 2021, with a 12-month transitional period. From 21 December 2022, compliance with the new requirements became mandatory.

For further information, see the [ACCC Product Safety webpage](#) on portable non-aerosol fire extinguishers.

Australian/New Zealand Standards

AS/NZS 1841-2007 Portable fire extinguishers

AS/NZS 1841-2007 defines the following fire extinguishing agent types:

- Portable Fire Extinguishers - General – AS/NZS 1841.1 (Part 1)
- Water – AS/NZS 1841.2 (Part 2)
- Wet chemical – AS/NZS 1841.3 (Part 3)
- Foam – AS/NZS 1841.4 (Part 4)
- Powder – AS/NZS 1841.5 (Part 5)
- CO₂ – AS/NZS 1841.6 (Part 6)
- Vaporizing liquid – AS/NZS 1841.7 (Part 7)
- Non-rechargeable – AS/NZS 1841.8 (Part 8).

AS/NZS 1841.1 also includes a provision that allows for new or alternative extinguisher designs to be certified, provided they meet all relevant performance and safety requirements and are approved by a JAS-ANZ accredited certifying body.

This requirement contained in AS/NZS 1841.1 Clause 1.2 states:

Any material, design, method of assembly or procedure that does not comply with the specific requirements of this Standard may be used provided the following criteria are met:

- a. *The portable fire extinguisher complies with the performance and test requirements of the AS/NZS 1841.1 2007.*
- b. *A certifying body having JAS-ANZ registration for product certification to Australian/New Zealand Standard AS/NZS 1841 attests in writing that it is no less safe than a portable fire extinguisher manufactured in accordance with the specific requirements of this Standard. The relative safety of the portable fire extinguishers is determined with regard to the purpose of the extinguishers, any instructions and warnings relating to the use of the extinguishers, and what might reasonably be expected to be done with or in relation to the extinguishers.*

While this provides a pathway for certain innovations, there are currently no established test methods or certification processes within Australia that would enable a lithium-ion-specific extinguisher to be assessed under this clause. As such, products promoted as “suitable for lithium-ion battery fires” cannot presently claim compliance with the Australian Standards framework.

AS/NZS 1841-2007 does not specify any fire extinguisher agent types suitable for lithium-ion battery fires.

AS/NZS 1850-2009 Portable fire extinguishers - Classification, rating and performance testing

AS/NZS 1850-2009 defines the following fire classifications, and associated performance tests, for extinguishers:

- Class A – fires involving carbonaceous solids such as wood, cloth, paper, rubber and many plastics
- Class B – fires involving flammable and combustible liquids
- Class C – fires involving combustible gases
- Class D – fires involving certain combustible metals
- Class E – fires involving electrically energised equipment
- Class F – fires involving combustible cooking oils or fats.

There are no fire classifications or performance tests within AS/NZS 1850-2009 for extinguishers intended for lithium-ion battery fires.

AS 2444-2001 Portable fire extinguishers and fire blankets—Selection and location

AS 2444-2001 specifies the requirements for selecting and locating portable fire extinguishers and fire blankets.

This standard currently includes the following requirements:

- Minimum size requirements
- Placement and accessibility criteria
- Labelling and instructions for use.

There are no provisions in AS 2444-2001 that specifically address the selection and location of fire extinguishers and fire blankets for lithium-ion battery fires.

AS/NZS 3504-2006+A1 Fire blankets

AS/NZS 3504-2006+A1 specifies the requirements for fire blankets, including their design, materials, size and performance tests.

This standard currently includes the following requirements for fire blankets:

- Minimum blanket size and material performance
- Heat resistance and durability testing
- Labelling and instructions for use.

There are no provisions within AS/NZS 3504-2006+A1 that specifically address the use of fire blankets intended for lithium-ion battery fires.

Conclusion

Under the Australian Consumer Law, suppliers of portable fire extinguishers must comply with the *Consumer Goods (Portable Non-aerosol Fire Extinguishers) Safety Standard 2021*. This requires compliance with AS/NZS 1841-2007 (with modifications). AS/NZS 1850-2009 applies indirectly, as it is referenced for classification and performance tests, but it is not separately mandated.

Currently, there are no fire classifications or performance tests within AS/NZS 1841-2007 and AS/NZS 1850-2009 for extinguishers intended for lithium-ion battery fires. Similarly, AS/NZS 3504 and AS 2444 contain no provisions that designate fire blankets as suitable for lithium-ion battery fires.

To date, no fire extinguisher sold in Australia has an approved classification or recognised fire test rating under the Australian Standards framework for lithium-ion battery fires. Accordingly, products marketed for this purpose cannot claim compliance with the relevant Australian Standards or the ACCC Mandatory Standard. Members are encouraged to exercise caution when interpreting supplier claims.

For additional guidance on safe practices, please refer to [FPA Australia's Good Practice Guide GPG-10: Charging, Using and Disposing of Lithium-ion Batteries](#).

References

- AS/NZS 3504-2006+A1, *Fire blankets*
AS/NZS 1841:2007, *Portable fire extinguishers series (AS/NZS 1841 Parts 1 to 8)*.
- AS/NZS 1850:2009, *Portable fire extinguishers - Classification, rating and performance testing*.
- AS 1851: 2012, *Routine service of fire protection systems and equipment*.
- AS 2444: 2001, *Selection & location of portable fire extinguishers & fire blankets*.
- *Consumer Goods (Portable Non-aerosol Fire Extinguishers) Safety Standard 2021*.