

AS 7521:2018



Interior Crashworthiness



Rolling Stock Standard



This Australian Standard® AS 7521 Interior Crashworthiness was prepared by a Rail Industry Safety and Standards Board (RISSB) Development Group consisting of representatives from the following organisations:

Queensland Rail
Downer Group

Transport for NSW
United Group Limited

Metro Trains Melbourne

The Standard was approved by the Development Group and the Rolling Stock Standing Committee in Select SC approval date. On July 10, 2018 the RISSB Board approved the Standard for release.

This Standard was issued for public consultation and was independently validated before being approved.

Development of the Standard was undertaken in accordance with RISSB's accredited process. As part of the approval process, the Standing Committee verified that proper process was followed in developing the Standard.

RISSB wishes to acknowledge the positive contribution of subject matter experts in the development of this Standard. Their efforts ranged from membership of the Development Group through to individuals providing comment on a draft of the Standard during the open review.

I commend this Standard to the Australasian rail industry as it represents industry good practice and has been developed through a rigorous process.



Paul Daly
Chief Executive Officer
Rail Industry Safety and Standards Board

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1 Introduction

1.1 Purpose

This Standard sets the minimum requirements for the interiors of rolling stock to minimise the risk of injury during derailments, collisions and accidents.

This Standard contributes to the management of the following risks:

- Individual striking / being struck by surfaces / structures / objects.
- contact with hot / electrical / chemical / hazardous substances.

1.2 Scope

This Standard applies to all rolling stock (including rail bound track maintenance machines) intended to carry passengers as well as individuals carrying out their duties or resting.

This Standard applies to rolling stock:

- entering service after the published date of this Standard, or
- interior component undergoing major modifications or replacement with new designs after the published date of this Standard. A So Far As Is Reasonably Practicable (SFAIRP) justification assessment should be undertaken.

This Standard does not apply to heritage rolling stock and rolling stock operating on cane railways, light rail vehicles, monorail networks and road rail vehicles.

The requirements for car body structural crashworthiness are detailed in AS 7520.

1.3 Compliance

There are two types of control contained within Australian Standards developed by RISSB:

- (a) Requirements.
- (b) Recommendations.

Requirements – it is mandatory to follow all requirements to claim full compliance with the Standard.

Requirements are identified within the text by the term 'shall'.

Recommendations – do not mention or exclude other possibilities but do offer the one that is preferred.

Recommendations are identified within the text by the term 'should'.

Recommendations recognise that there could be limitations to the universal application of the control, i.e. the identified control can not be able to be applied or other controls can be appropriate / better.

For compliance purposes, where a recommended control is not applied as written in the standard it could be incumbent on the adopter of the standard to demonstrate their actual method of controlling the risk as part of their WHS or Rail Safety National Law obligations. Similarly, it could also be incumbent on an adopter of the standard to demonstrate their method of controlling the risk to contracting entities, or interfacing organisations where the risk may be shared.

Controls in RISSB standards address known railway hazards as included in an appendix.