New Zealand Standard

Playground Equipment and Surfacing


A New Zealand adoption of BS EN 1176 Parts 1-7:1998 (MOD), BS EN 1177:1998 (MOD) and BS 7188:1998 (MOD)

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COMMITTEE REPRESENTATION

The Playground Equipment Safety Committee (P 5828) was responsible for the preparation of this Standard and consisted of:

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Building Industry Authority
Holiday Accommodation Parks Association of New Zealand Inc.
Injury Prevention Network of Aotearoa New Zealand
Local Government New Zealand
McDonald’s Family Restaurants (New Zealand) Ltd.
New Zealand Recreation Association
Royal New Zealand Plunket Society Inc.
Wellington Wairarapa School Trustees Association
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ACKNOWLEDGEMENTS

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New Zealand Standard

PLAYGROUND
EQUIPMENT
AND SURFACING

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JOINT AUSTRALIAN/NEW ZEALAND STANDARDS

AS/NZS ISO 9000:- Quality management and quality assurance Standards

9000:2000 Quality management systems – Fundamentals and vocabulary

9000.2:1998 Generic guidelines for the application of ISO 9001, ISO 9002 and ISO 9003

9000.3(Int):1998 Guidelines for the application of ISO 9001:1994 to the development, supply, installation and maintenance of computer software

9000.4:1994 Guide to dependability and programme management

NEW ZEALAND LEGISLATION

Education (Early Childhood Centres) Regulations 1998

OTHER PUBLICATIONS


REVIEW OF STANDARDS

Suggestions for improvement of this Standard will be welcomed. They should be sent to the Chief Executive, Standards New Zealand, Private Bag 2439, Wellington.
FOREWORD

This Standard NZS 5828:2004 Playground equipment and surfacing was prepared by the Standards New Zealand Playground Equipment Safety Committee P 5828 to supersede the following Standards one year from the date of publication of this Standard.

(a) NZS 5828.2:1986 Specifications for playgrounds and playground equipment – Part 2 Materials and labelling requirements

(b) NZS 5828.3:1986 Specifications for playgrounds and playground equipment – Part 3 Design and construction – Safety aspects

(c) AS/NZS 4422:1996 Playground surfacing – Specifications, requirements and test method

(d) AS/NZS 4486.1:1997 Playgrounds and playground equipment Part 1: Development, installation, inspection, maintenance and operation.

In the adoption of this Standard, the committee reviewed the range of playground Standards available internationally, and chose to adopt the BS EN 1176 Parts 1-7:1998, BS EN 1177:1998 and BS 7188:1998, with additional recommendations/requirements for playground equipment and surfacing to meet needs that are specific to the New Zealand environment.

• Appendix A Supervised Early Childhood Facilities contains specific requirements for supervised early childhood facilities.

• Appendix B Transition contains specific requirements relating to transitional arrangements for manufacturers.

• Appendix C Upper Body Equipment contains specific recommendations regarding free height of fall for upper body and overhead equipment.


• Appendix E Related Documents contains legislation and Standards applicable to New Zealand.

This Standard may be reviewed in the light of future revisions of the BS EN Standards, with recommendations/requirements for playground equipment and surfacing to meet needs that are specific to the New Zealand environment.

For the purpose of this Standard, the word “shall” refers to practices which are mandatory for compliance with Standard. The words “should” or “may” refer to practices which are advised or recommended.
The term “normative” is used in this Standard to define the application of the Appendices to which it applies. A “normative” Appendix is an integral part of a Standard.

This Standard is intended to promote and encourage the provision and use of playgrounds that are well designed, well constructed, well maintained, innovative and challenging. Play is essential to the healthy development of children. Through independent or cooperative play, children are able to learn about themselves and their environment, while stimulating their creative, emotional and physical development.

Children interact with playground equipment in a way that will vary depending on the child’s age and level of development. The primary aim of any playground should be to stimulate a child’s imagination, provide excitement and adventure in safe surroundings, and allow scope for children to develop their own ideas of play. Ideally playgrounds should encourage development of motor skills and present users with manageable challenges to develop physical skills and to find and test their limits.

At the time New Zealand’s first playground Standard was published in 1986, there was widespread public concern at the number of children being seriously injured in falls from playground equipment. Subsequent research showed that of the thousand or more children admitted to hospital each year for playground related injuries, 92 per cent had fallen from equipment (Chalmers and Langley, 1990). The most common equipment type involved was upper body and overhead equipment, followed by swings and slides, and the most common injury was a fracture of the upper limbs, followed by head injury. Appendix C Upper Body Equipment contains specific recommendations regarding free height of fall for upper body and overhead equipment. The only other cause of any significance was children striking against or being struck by equipment, with five per cent of injured children being in this category. Most commonly these incidents involved preschool age children being struck in the head by swings.

More recent research results indicate that falls from playground equipment continue to be an issue in New Zealand. The requirements relating to protection against falling and protection against injuries in the falling space in this Standard may be reviewed in the light of future published research.

A playground injury that leaves a child permanently disabled is not acceptable. Those responsible for playgrounds must take every possible care to identify and eliminate unacceptable playground hazards. However, it should also be understood that children will often lose interest in equipment that does not challenge them, and that children will experience minor injuries as they grow and learn, in playgrounds and away from them. This Standard does not eliminate the need for supervision of children in playgrounds.
Neither does this Standard purport to address all the hazards associated with playgrounds, or attempt to provide playgrounds that will meet the needs of all children for developmental challenge and growth. Children still need to experience a variety of settings (such as bush walking, swimming, playing of sport etc.) to satisfy all their developmental needs. Like these other physical activities, the use of playgrounds involves the risk of injury. However, developing and maintaining a playground in accordance with this Standard will help minimize the risk of serious injury occurring.

A Handbook will be developed as a guide for compliance with the Standard. The Handbook will not replace the Standard.
Playground equipment —

Part 1: General safety requirements and test methods
National foreword

This British Standard is the English language version of EN 1176-1:1998. Together with BS EN 1176-2 to -6, inclusive, it supersedes BS 5696-1:1997, BS 5696-1:1986 and BS 5696-2:1986, which were withdrawn on 31 December 1998.

This standard is intended for playground equipment in public parks, schools, commercial facilities (public houses, restaurants), community areas and shopping areas.

The UK participation in its preparation was entrusted to Technical Committee SW/65, Children's playground equipment, which has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

A list of organizations represented on this committee is given in national annex NA.

This standard was produced as a result of European discussions in which the UK actively participated to ensure that the UK knowledge and experience in children’s playground safety standards was fully represented.

Annex G of EN 1176-1 applies solely within Germany as a result of their existing national laws and is not to be considered outside that country.

Prior to the publication of this standard, the Play Safety Forum convened by the National Playing Fields Association advised the use of BS 5696 or any other equivalent European Standard, making particular reference to the DIN standard 7928 for playground equipment. EN 1176 attempts to take the best that both standards offer and SW/65 considers that this has been achieved.

After this standard had been written and approved, the Health and Safety Executive representative advised Technical Committee SW/65 of the provisions of the Health and Safety at Work etc. Act 1974 and the Management of Health and Safety Regulations 1992. The intention of safety legislation in this country is to maintain or improve health and safety standards wherever revision offers an opportunity. SW/65 considers that in general EN 1176 and EN 1177 have achieved this.

There remain, however, areas where the previous levels of safety in BS 5696 may be considered to be at variance. The Health and Safety Executive may be able to offer further guidance on this matter.

Cross-references

The British Standards which implement international or European publications referred to in this document may be found in the BSI Standards Catalogue under the section entitled “International Standards Correspondence Index”, or by using the “Find” facility of the BSI Standards Electronic Catalogue.

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Playground equipment —
Part 1: General safety requirements and test methods

This European Standard was approved by CEN on 24 May 1998.
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