# Building & Construction Industry Guide Australian Standards® and Certification



6 April 2010

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#### Introduction

This document provides information on Standards, Certification schemes and other industry specific information that may be of interest to anyone working within the building industry, including information relevant to manufacturers, importers and suppliers of building products.

You can find Standards relevant to building and construction in the SAI Global InfoStore Subject Area <u>Construction materials and building</u>. The Preface, Table of Contents, Foreword and Scope of most Australian Standards® can be previewed there.

Disclaimer: The information contained in these pages is provided by way of indicative guidance only and SAI Global Limited does not represent that it is accurate or complete or suitable for any particular purposes. The onus remains with users to satisfy themselves of their requirements and needs for their own particular circumstances.

# **Building Regulations**

The current 2009 edition of the Building Code of Australia (BCA) references approximately 150 Australian and International Standards. Typically each year, the BCA is updated and released in May by the Australian Building Codes Board (ABCB).

The SAI Global <u>BCA + Standards</u> online service is ideal for organizations working within or supplying to the building industry. Subscribers to the service have access to both volumes of the Building Code of Australia as well as all of the Australian Standards® referenced within it.

See page 33 of this document for the websites of the various Commonwealth / State building regulators.

#### Timbers

#### **General Information**

There are a number of Australian Standards® for <u>timber structures</u>, <u>sawn timbers</u>, <u>wood-based panels</u>, <u>timber floors</u> and <u>plywood</u>, that can be used for a wide variety of applications.

Timbers used in Australia should be tested to the <u>AS/NZS 1080</u> series of Standards. Manufacturing Standards for different types of timbers specify specific moisture content levels for timbers. Moisture levels for timbers are determined by following the methods outlined in <u>AS/NZS 1080.1:1997 Timber - Methods of test - Moisture content</u>. A list of recommended moisture levels for timbers is included in Appendix F to <u>AS 1684.2-2006</u>, <u>AS 1684.3-2006</u> and <u>AS 1684.4-2006</u>

The appendix also includes information on recommended moisture levels for strip flooring and shrinkage levels for timbers used for top plates, lintels, bottom plates and floor joists.

Timbers used indoors and outdoors should be preservatively treated. Preservative treatment tests for different types of timbers are included in the <u>AS 1604</u> series of Standards. Durability details for timbers used for above-ground and in-ground situations are included in Appendix C in <u>AS 1684.2-2006</u>, <u>AS 1684.3-2006</u> and <u>AS 1684.4-2006</u> Durability levels for timbers are expressed in terms H1-H6 ratings.

Timbers should be tested to <u>AS 1604.1-2005 Specification for preservative treatment - Sawn and round timber</u> to conform to the durability levels listed in Australian timber framing Standards. Tables listing natural durability levels, common uses and fire properties for different types of timber species used for framing are included in Appendix H to <u>AS 1684.2-1999</u>, <u>AS 1684.3-2006</u> and <u>AS 1684.4-2006</u>

# Timber Structures (Timber Framing - AS Series of Standards)

Information covering design, installation, fixing and erection requirements for timbers used for structural applications in residential buildings is included in the AS 1684 series of Standards:

AS 1684.1-1999 Residential timber-framed construction - Design criteria

AS 1684.2-2006 Residential timber-framed construction - Non-cyclonic areas

AS 1684.3-2006 Residential timber-framed construction - Cyclonic areas

AS 1684.4-2006 Residential timber-framed construction - Simplified - Non-cyclonic areas

Australian Standard® <u>AS 1684.4-2006</u> is a simplified version of <u>AS 1684.2-2006</u>. The Standard only covers framing requirements for basic non-cyclonic wind speed categories (N1 and N2). Wind speeds for all non-cyclonic areas (N1, N2, N3 and N4) are included in <u>AS 1684.2-2006</u>. Wind speeds for cyclonic areas (C1, C2 and C3) are included in AS 1684.3-2006.

Australian Standard® <u>AS/NZS 1170.2:2002 Structural design actions - Wind actions and AS 4055-2006 Wind loads for housing are used to determine requirements for the types of wind speeds defined in the AS 1684 series of Standards.</u>

The spans listed in the supplements to <u>AS 1684.2-2006</u>, <u>AS 1684.3-2006</u> and <u>AS 1684.4-2006</u> are linked to wind speeds and grades for visually (F) and mechanically (MGP) graded timbers. Purchasers of PDF editions of these Standards will receive the supplements in attached Winzip files. The supplements for hard copies of this Standard are included on a CD Rom. Timber frames should be constructed on slabs and footings that have been designed to <u>AS 2870-2006 Residential slabs and footings - Construction</u> Engineered solutions may be required where designs for timber frames are not covered by the <u>AS 1684 series of timber framing Standards</u>. If this is the case, the methods outlined in <u>AS 1720.1-1997 Timber structures - Design methods apply</u>.

# **Timber Structures (Trusses)**

Timber trusses should be installed by following the methods outlined in <u>AS 4440-2004 'Installation of nailplated timber trusses</u> Engineering and design principles for timber trusses are included in <u>AS 1720.1-1997</u>

#### Sawn Timbers

Sawn timbers used for structural applications should be either visually (F Grades) or mechanically (MGP) graded timbers. Spans listing sizes for these types of timbers are included in the <u>AS 1684</u> series of Standards. A list of timbers used for structural and non-structural applications is included in <u>AS/NZS 1148:2001 Timber - Nomenclature - Australian, New Zealand and imported species</u>

There are Australian Standards® for visually graded softwoods, hardwoods and plywood. Visual grades for timbers are also linked to structural grades for seasoned and unseasoned timbers. Information on methods used to determine strength details for structural grades are included in AS 1720.1-1997

Tables comparing F grades to structural grades for softwoods and hardwoods are included in the Standards listed below. These Standards also include information on permissible deviations (e.g. twists and bows) for different grades of timbers.

AS 2082-2007 Timber - Hardwood - Visually stress-graded for structural purposes AS 2858-2008 Timber - Softwood - Visually stress-graded for structural purposes

Information on methods used to determine requirements for mechanically (MGP) graded timbers are included in <u>AS/NZS 1748:2006 Timber - Mechanically stress-graded for structural purposes</u> and <u>AS 1720.1-1997</u>

Softwoods used for timber decks, cladding, fascias and flooring should be manufactured to <u>AS 4785.1-2002 Timber - Softwood - Sawn and milled products.</u>

Wood-based Panels

In terms of Australian Standards®, wood-based panels are classified as particleboard, fibreboards and decorative overlaid wood panels. Information on Standards for these types of timber is included below. All wood based panels need to be tested to the <u>AS/NZS 4266</u> series of Standards.

Information covering manufacturing tests and quality requirements for Standard, moisture resistant and high performance particleboards is included in <u>AS/NZS 1859.1:2004 Reconstituted wood-based panels - Specifications - Particleboard</u>. This Standard is used to measure structural properties, formaldehyde content levels, moisture details and dimensions for particleboard.

Dry-processed fibreboards supplied in Australia should be tested to <u>AS/NZS 1859.2:2004 Reconstituted</u> <u>wood-based panels - Specifications - Dry-processed fibreboards</u>. This Standard is used to determine structural properties, moisture content levels and dimensions for low, medium and high density fibreboards.

The Australian manufacturing Standard for different types of decorative overlaid wood panels is <u>AS/NZS 1859.3:2005 Reconstituted wood-based panels - Specifications - Decorative overlaid wood panels</u>. This Standard covers manufacturing requirements and dimensions for wood panels manufactured from low pressure melamine, pvc film, paper foils and wood veneer materials.

Wet-processed fibreboard supplied in Australia should be tested to <u>AS/NZS 1859.4:2004 Reconstituted wood-based panels - Specifications - We-processed fibreboard</u>. This Standard defines 5 classifications for different types of wet-processed fibreboard. These types of fibreboard products are defined in Section 5 of the Standard. The terms 'medium boards' and 'hardboards' may also be 6 April 2010 7 used to describe wet-processed fibreboard. Information covering manufacturing requirements and dimensions for wet-processed fibreboards are included in the Standard.

#### **Timber Floors**

Section 5 in <u>AS 1684.2-2006</u>, <u>AS 1684.3-2006</u> and <u>AS 1684.4-2006</u> includes information on recommended nailing and laying practices for strip, tongued and grooved flooring. Durability levels and moisture levels for flooring are included in Appendix C to these Standards.

Finger-jointed hardwood flooring supplied in Australia should be manufactured to <u>AS 2796.1-1999 Timber - Hardwood - Sawn and milled products - Product specification</u> Grade descriptions for different types of hardwood timbers used for flooring are included in <u>AS 2796.2-2006 Timber - Hardwood - Sawn and milled products - Grade description</u>. Softwood timbers used for flooring should be manufactured to <u>AS 4785.1-2002 Timber - Softwood - Sawn and milled products - Product specification</u>

Particleboard used for flooring should be manufactured to <u>AS/NZS 1860.1:2002 Particleboard flooring - Specifications</u> and installed by following the methods outlined in <u>AS 1860.2-2006 Particleboard flooring - Installation</u>

Timber floors should be sanded and finished by following the methods outlined in <u>AS 4786.2-2005 Timber</u> flooring - Sanding and finishing

**Plywood** 

Plywood used for structural purposes should be manufactured to the <u>AS/NZS 2269</u> series of Standards. Information covering loading and strength details for visually graded (F) plywoods is included in Section 5 to <u>AS 1720.1-1997</u>

#### Masonry

#### **General Information**

There are structural design and manufacturing Standards for masonry products. Detailed information on definitions for masonry and diagrams illustrating bricks, blocks and masonry units are included in <u>HB 50-2004 Glossary of building terms</u>

#### **Structural Design Standards**

The Australian Standard® for buildings manufactured from reinforced, unreinforced and prestressed masonry materials is <u>AS 3700-2001 Masonry structures</u>. The document number for the commentary to this Standard is <u>AS 3700 Supp1-2004</u>. These publications are included in <u>AS 3700 Set-2007 Masonry structures Set</u>.

Structural design requirements for unreinforced masonry are included in Section 7 of <u>AS 3700-2001</u>. Section 8 in the Standard defines structural design requirements for reinforced masonry. Information covering design requirements for prestressed masonry is included in Section 9 of AS 3700-2001

Masonry structures should also be designed to conform to the loads covered in the <u>AS/NZS 1170</u> series of Standards and <u>AS 4055-2006 Wind loads for housing</u>

Durability levels for masonry structures are defined in Section 10 of <u>AS 3700-2001</u>. A list of durability requirements for mortar used with masonry is included in Tables 10.1 and 10.2 of the Standard.

Durability levels for mortar can be assessed by following the tests outlined in <u>AS/NZS 4456.10:2003 Masonry units and segmental pavers and flags - Methods of test - Determining resistance to salt attack.</u> Exposure levels for different types of environments can affect the durability and performance of masonry structures. A list of exposure classifications for different areas is included in <u>AS/NZS 2312:2002 Guide to the protection of structural steel against atmospheric corrosion by the use of protective coatings</u>

Fire tests for masonry are undertaken by completing the types of tests outlined in <u>AS 1530.4-2005 Methods for fire tests on building materials, components and structures - Fire-resistance test of elements of construction (Note: See Fire Test pages for information on fire tests for different types of building products).</u>

#### **Tolerances**

Tolerances for workmanship on masonry structures are summarized in Table 11.1 of <u>AS 3700-2001</u>. The table includes information on tolerances for structural and non-structural masonry work. *Product (Manufacturing Standards)* 

There are manufacturing Standards for the types of products listed below:

Masonry Units

Products used to build segmental walls (e.g. concrete, stone and fire clay materials)

Segmental Pavers

Mortar

# **Masonry Units**

The Australian manufacturing Standard for masonry units (e.g. pavers, bricks, blocks) is <u>AS/NZS</u> 4455.1:2008 Masonry units, pavers, flags and segmental retaining wall units - Masonry units. These types of products should also be tested to the <u>AS/NZS 4456</u> series of Standards. 6 April 2010 9 Tolerances and deviations for masonry units are included in Table 2.1 of <u>AS/NZS 4455.1:2008</u>. Tolerances can also be tested by following the methods outlined in <u>AS/NZS 4456.3.2003 Masonry units and segmental pavers and flags - Methods of test - Determining dimensions</u>

Durability levels for masonry units are listed in Table 2.3 of <u>AS/NZS 4455.1:2008</u> Durability tests for masonry units are also defined in <u>AS/NZS 4456.10:2003</u>

# **Segmental Walls**

The manufacturing Standard for products used to manufacture segmental walls is <u>AS/NZS 4455.3:2008</u> Masonry units, pavers, flags and segmental retaining wall units - Segmental retaining wall units. Products used to design segmental walls should also be tested to the Standards listed below:

AS/NZS 4456.2:2003 'Masonry units and segmental pavers and flags - Methods of test - Assessment of mean and Standard deviation'

AS/NZS 4456.3:2003 'Masonry units and segmental pavers and flags - Methods of test - Determining dimensions'

AS/NZS 4456.4:2003 'Masonry units and segmental pavers and flags - Methods of test - Determining compressive strength of masonry units'

AS/NZS 4456.10:2003 Masonry units and segmental pavers and flags - Methods of test - Determining resistance to salt attack

Tolerances and recommended deviations for segmental retaining walls are listed in Table 2.1 of  $\underline{\mathsf{AS/NZS}}$  4455.3:2008

# **Segmental Pavers**

Information covering requirements for segmental pavers for residential applications is included in <u>AS 3727-1993 Guide to residential pavements</u>. A summary of flatness levels and tolerances for these types of pavers is included in Table 1 of <u>AS 3727-1993 Cross-sectional diagrams for segmental pavers are also included in this Standard.</u>

#### **Mortars**

Mortars used with masonry structures should be tested to <u>AS 2701-2001 'Methods of sampling and testing mortar for masonry construction'.</u> Diagrams illustrating mortar joints are included in Part 2 of <u>HB</u> 50-2004. Durability levels for mortars are listed in Tables 10.1 and 10.2 of AS 3700-2001. 6 April 2010 10

#### Metals

#### **General Information**

There are Australian and overseas Standards for different types of metals. The ideal product for organizations requiring comprehensive and up-to date information on metals is the <u>Metals Infobase</u>. Australian Standards® for metals provide information on manufacturing requirements, sampling methods, chemical compositions, mechanical properties and heat treatment details for materials.

Steels supplied overseas and in Australia should be designated with Workstuff or Unified Numbering System (UNS) numbers. Metals supplied manufactured outside the United States are commonly designated with UNS numbers. A Workstuff numbers for steels will start with 1. and it will then have 4 digits e.g. (1.222). Workstuff numbers can also be used to provide details on suppliers of different types of steels. A list of UNS numbers, chemical properties for steels and details for Standards referencing UNS numbers is included in 'Unified Numbering System 2008: Metals and Alloys in the Unified Numbering System (UNS).

Suppliers and purchasers of steels should check to see if manufacturers of their products supply certificates. The certificates should include the details that are covered in the European Standards listed below.

I.S. EN 10168:2004 'Steel Products - Inspection Documents - List of Information and Description'
I.S. EN 10204:2004 'Metallic Products - Types of Inspection Documents'

Yield stress levels for metals are completed by following the tests outlined in <u>AS 1391-2007 'Metallic</u> materials - Tensile testing at ambient temperatures'

There are also Standards that cover <u>destructive</u>, <u>non-destructive</u>, <u>mechanical</u> and <u>hardness</u> tests for metals.

Methods used to analyze properties for irons and steels are included in the <u>AS 1050</u> and <u>AS/NZS 1050</u> series of Standards.

#### Stainless Steels

There are no current Australian Standards® specifying chemical, mechanical, and heat treatment properties for stainless steels. These details are included in the ASTM and European (EN) Standards listed below:

ASTM A240/A240M-09a 'Standard Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet and Strip for Pressure Vessels and for General Applications'

I.S. EN 10088-1:2005 'Stainless Steels - Part 1: List of Stainless Steels'

I.S. EN 10088-2:2005 'Stainless Steels - Part 2: Technical Delivery Conditions For Sheet/plate And Strip of Corrosion Resisting Steels for General Purposes'

I.S. EN 10088-3:2005 'Stainless Steels - Part 3: Technical Delivery Conditions For Semi-finished Products, Bars, Rods, Wires, Sections And Bright Products Of Corrosion Resisting Steels For General Purposes'

#### Structural Steels

The Australian Standards® listed below cover chemical, mechanical and heat treatment conditions for different types of structural steels.

AS/NZS 1163:2009 'Cold-formed structural steel hollow sections'

AS 1397-2001 'Steel sheet and strip - Hot-dipped zinc-coated or aluminium/zinc-coated'

AS/NZS 3678:1996 'Structural steel - Hot-rolled plates, floorplates and slabs'

AS/NZS 3679.1:1996 'Structural steel - Hot-rolled bars and sections'

AS/NZS 3679.2:1996 'Structural steel - Welded I sections'

# **Wrought Alloy Steels**

The Australian Standard® for wrought and hardened steels is <u>AS 1444-2007 'Wrought alloy steels - Standard</u>, hardenability (H) series and hardened and tempered to designated mechanical properties'.

# **Steels for Pressure Equipment**

Steels used to manufacture pressure equipment should be manufactured to <u>AS 1548-2008 'Fine grained</u> weldable steel plates for pressure equipment'

# **Reinforcing Bars**

Steel reinforcing materials supplied with concrete structures should be tested to <u>AS/NZS 4671:2001</u> <u>'Steel reinforcing materials'.</u> Ductility grades for steel reinforcing materials are also included in Table 6.2.1 of <u>AS 3600-2001</u> 'Concrete structures'

# Irons

Standards for different types of irons include information on chemical compositions, mechanical properties and heat treatment conditions for materials used to manufacture irons.

AS 1830-2007 'Grey cast iron'

AS 1831-2007 'Ductile cast iron'

AS 1832-2007 'Malleable cast iron'

AS 2027-2007 'Abrasive-resistant cast irons'

AS 5049-2002 'Cast iron - Designation of microstructure of graphite'

AS 5052-2007 'Compacted (vermicular) graphite cast irons - Classification'

#### **Cast and Forged Steels**

Information covering manufacturing requirements for cast and forged steels is included in the Standards listed below. These Standards include information on chemical compositions, mechanical properties and heat treatment conditions for materials used to manufacture cast and forged steels.

AS 1448-2007 'Carbon steel and carbon-manganese steels - Forgings (ruling section 300 mm maximum)'

AS 2074-2003 'Cast steels'

#### **Aluminium Allovs**

Australian Standards® for different types of aluminium alloys are listed below. Aluminium alloys should be anodized by the following methods outlined in <u>AS 1231-2000 'Aluminium and aluminium alloys - Anodic oxidation coatings'</u> 6 April 2010 12

Thickness levels and mechanical properties for alloys used for structural purposes are listed in Tables 3.3 (a) and 3.3 (b) to <u>AS/NZS 1664.1:1997 'Aluminium structures - Limit state design'</u> and <u>AS/NZS 1664.2:1997 'Aluminium structures - Allowable stress'</u>

Compositions for wrought alloys are included in <u>AS 2848.1-1998 'Aluminium and aluminium alloys - Compositions and designations - Wrought products'</u> A list of Standards providing details on

manufacturing requirements, chemical compositions, mechanical properties and tempering (heat treatment) requirements for aluminium alloys is included below.

AS/NZS 1734:2007 'Aluminium and aluminium alloys - Flat sheet, coiled sheet and plate' AS/NZS 1865:1997 'Aluminium and aluminium alloys - Drawn wire, rod, bar and strip' AS/NZS 1866:1997 'Aluminium and aluminium alloys - Extruded rod, bar, solid and hollow shapes'

AS/NZS 1867:1997 'Aluminium and aluminium alloys - Drawn tubes'
AS 1874-2000 'Aluminium and aluminium alloys - Ingots and castings'

# Coppers

Standards are also available for different types of building and plumbing products manufactured from <a href="copper">copper</a>. Plumbing products (e.g. tapware, pipes and waste fittings) should be manufactured from dezincification resistance (DR) brass. The Standard for dezincification resistance brass is <a href="AS 2345-2006">AS 2345-2006</a> 'Dezincification resistance of copper alloys'

#### Concrete

There are a wide variety of Australian Standards® and handbooks for different types of <u>concrete</u> and <u>cement</u> products. The publications we supply cover structural design, manufacturing requirements and laboratory tests for different grades of concrete and cementitous materials. Information on publications covering these topics is included below.

Australian Standards® and handbooks relating to <u>concrete</u> define requirements for precast and reinforced concrete products. Precast concrete products are not installed with reinforcing steels. Alternatively, reinforced concrete structures are supplied with reinforcing steels. Reinforcing steels used with concrete structures should be tested to <u>AS/NZS 4671:2001 'Steel reinforcing materials'</u> Definitions for different types of concrete and related products are included in <u>HB 50-2004 'Glossary of building terms'</u>

# **Concrete - Design Publications**

Concrete structures manufactured from precast and reinforced concrete materials should conform to the design requirements of <u>AS 3600-2009 'Concrete structures'</u>. The 2001 edition of <u>AS 3600 is still referenced in the 2009 edition of the Building Code of Australia.</u>

A summary of recommended exposure classifications for concrete structures located in different regions is included in Section 4.3 of <u>AS 3600-2009</u>. This Standard does not cover requirements for concrete used to build maritime structures. These details are included in <u>AS 4997-2005 'Guidelines for the design of maritime structures'</u>

There are also 3 handbooks providing further details on this Standard:

HB 64-2002 'Guide to concrete construction'

HB 71-2002 'Reinforced concrete design in accordance with AS 3600-2001'

NP:PCH-2009 'Precast Concrete Handbook'

Linear, angular, profile and general building tolerances for materials used to manufacture precast concrete structures is included in Chapter 4 of <a href="NP:PCH-2009">NP:PCH-2009</a> Tolerances for reinforced concrete structures are included in AS 3600-2001

# **Concrete - Manufacturing Standards and Laboratory Tests**

The Australian manufacturing Standard for all types of concrete (e.g. normal-class, special-class, hardened concrete and plastic concrete is <u>AS 1379-2007 'Specification and supply of concrete'</u> There is also a commentary to this Standard. The document number for the commentary is <u>AS 1379 Supp 1-2008</u>. Table 1 in <u>AS 1379-2007</u> lists recommended comprehensive strength levels for different grades of concrete. Information on recommended sampling plans and production control procedures for manufacturing concrete are outlined in Section 6 of the Standard. Sampling procedures used to manufacture concrete are also outlined in <u>AS 1012.1-1993 'Methods of testing concrete - Sampling of fresh concrete'</u>

Materials used to manufacture concrete structures should conform to structural adequacy, integrity and insulation fire resistance tests. These types of tests should be completed by following methods outlined in AS 1530.4-2005 'Methods for fire tests on building materials, components and structures - Fire-resistance test of elements of building construction'. Figures providing details on recommended structural adequacy levels for beams and a table listing fire insulation levels for concrete slabs are included in Section 5 of AS 3600-2001

Chemical admixtures added to concrete should be tested to <u>AS 1478.1-2000 'Chemical admixtures for concrete, mortar and grout - Admixtures for concrete'</u> 6 April 2010 14

Laboratory tests for the grades of concrete outlined in <u>AS 1379-2007</u> are covered by the <u>AS 1012</u> series of test methods. Curing tests for concrete specimens are covered by <u>AS 1012.1-1993</u> and <u>AS 1012.8.2-2000</u> 'Methods of testing concrete - Method of making and curing concrete'. Compressive tests for

cylinders used to manufacture concrete are completed by following the methods outlined in <u>AS 1012.9-1999</u> 'Methods of testing concrete - Determination of the compressive strength of concrete specimens'

#### Cements

There are Australian manufacturing Standards for portland (blended) cements and masonry cements. Portland and blended cements supplied in Australia should be tested to <u>AS 3972-1997 'Portland and blended cements'</u>. Laboratory tests for portland and blended cements are included in the <u>AS 2350</u> series of Standards. Supplementary materials supplied with portland and blended cements should be tested to the <u>AS 3582</u> and <u>AS/NZS 3582</u> series of Standards.

The Australian manufacturing Standard for masonry cement is AS 1316-2003 'Masonry cement'.

#### **Thermal Insulating Materials**

Thermal insulation materials supplied in Australia should be tested to <u>AS/NZS 4859.1:2002 'Materials for the thermal insulation of buildings - General criteria and technical provisions'.</u> Insulating materials also needs to be tested to the types of early fire hazard tests that are included in <u>AS/NZS 1530.3:1999 'Methods for fire tests on building materials, components and structures - Simultaneous determination of ignitability, flame propagation, heat release and smoke release'</u>

The installation Standard for insulating materials manufactured to the above Standards is <u>AS 3999-1992</u> 'Thermal insulation of buildings - Installation requirements' Information on recommended clearances between insulating materials and recessed luminaires is included in clause 4.5.2.3 of <u>AS/NZS 3000:2007</u> 'Electrical installations (known as the <u>Australian/New Zealand Wiring Rules)'</u>

#### **Acoustics**

Building panels, partitions and floor coverings supplied in different types of buildings should be tested to measure airborne sound (weight reduction indices) and impact sound levels.

# **Airborne Sound (Sound Weight Reduction Indices)**

AS/NZS 1276.1:1999 'Acoustics - Rating of sound insulation on buildings and of building elements - Airborne sound insulation'

AS/NZS ISO 717.1:2004 'Acoustics - Rating of sound insulation in buildings and of building elements - Airborne sound insulation'

# Impact Sound Levels

AS 1191-2002 'Acoustics - Methods for laboratory measurement of airborne sound transmission insulation of building elements'

AS ISO 140.6-2006 'Acoustics - Measurement of sound insulation in buildings and of building elements - Laboratory measurement of impact sound insulation of floors'

AS ISO 717.2-2004 'Rating of sound insulation in buildings and of building elements - Impact sound insulation'

AS/NZS ISO 140.7:2006 'Acoustics - Measurement of sound insulation in buildings and of building elements - Field measurement of impact sound insulation of floors'

# Roofing

There are Standards for different types of roofing materials.

# **Roofing Tiles**

Roofing tiles supplied in Australia should be manufactured to <u>AS 2049-2002 'Roof tiles'</u> and the <u>AS 4046</u> series of test methods. The installation Standard for roof files is <u>AS 2050-2002 'Installation of roof tiles'</u>.

#### Metal Roofing, Cladding and Flashing Materials

Metal roofing, cladding and flashing materials used in buildings can be manufactured and installed by following the methods covered in the publications listed below.

AS 1562.1-1992 'Design and installation of sheet roof and wall cladding - Metal'

AS/NZS 1562.2:1999 'Design and installation of sheet roof and wall cladding - Corrugated fibre-reinforced cement'

AS 1562.3-2006 'Design and installation of sheet roof and wall cladding - Plastic'

AS/NZS 2904:1995 'Damp-proof courses and flashings'

AS/NZS 4200.1:1994 'Pliable building membranes and underlays - Materials'

AS/NZS 4200.2:1994 'Pliable building membranes and underlays - Installation requirements'

HB 39-1997 'Installation code for metal roof and wall cladding'

There are no Australian Standards® for cladding manufactured from natural stone. The European manufacturing Standard for natural stone cladding is <u>I.S. EN 1469:2004 'Natural Stone Products - Slabs for Cladding - Requirements'</u> The installation Standard for cladding manufactured to this Standard is <u>BS 8298:1994 'Code of practice for design and installation of natural stone cladding and lining'</u>

# **Roof Edge Protection Systems**

The manufacturing Standard for roof edge protection systems used with residential is <u>AS/NZS</u> 4994.1:2009 'Temporary edge protection - General requirements'. Information on methods used to select, installation, erect and dismantle roof edge protection systems are included in <u>AS/NZS 4994.2:2009</u> 'Temporary edge protection - Roof edge protection - Installation and dismantling'.

#### **Doors**

#### **Fire Doors**

The Australian manufacturing Standard for fire doors is <u>AS 1905.1-2005</u> 'Components for the protection of openings in fire-resistant walls - Fire-resistant doorsets' Fire doors and locks supplied with fire doors also need to be tested to the Standards listed below:

AS/NZS 1530.4:2005 'Methods for fire tests on building materials, components and structures - Fire-resistance test of elements of construction'

AS 1530.7-2007 'Methods for fire tests on building materials, components and structures - Smoke control assemblies - Ambient and medium temperature leakage test procedure'

# **Security Doors and Window Grilles**

The Australian manufacturing Standard for security doors and window grilles is <u>AS 5039-2003 'Security screen doors and security window grilles'</u>. Locks supplied with security doors and windows should be tested to the <u>AS 4145</u> series of Standards.

Intruder resistance tests for security doors and window grilles are included in <u>AS/NZS 2343:1997 'Bullet-resistant panels and elements'</u> and <u>AS 3555.1-2003 'Building elements - Testing and rating for intruder resistance - Intruder-resistant panels'</u>

# Safety Glass & Windows

There are Australian Standards® for safety glass and window frames.

#### **Window Frames**

Window frames supplied in Australia should be manufactured to <u>AS 2047-1999 'Windows in buildings - Selection and installation'</u>. Window frames should also be tested to the methods listed below.

AS 4420.2-1996 'Windows - Methods of test - Deflection test'

AS 4420.3-1996 'Windows - Methods of test - Operating force test'

AS 4420.4-1996 'Windows - Methods of test - Air infiltration test'

AS 4420.5-1996 'Windows - Methods of test - Water penetration resistance test'

AS 4420.6-1996 'Windows - Methods of test - Ultimate strength test'

Window frames should be engineered to the methods covered in either <u>AS/NZS 1170.2:2002 'Structural design actions - Wind actions' or AS 4055-2006 'Wind loads for housing'.</u>

#### **Safety Glass**

Safety glass used in buildings should be designed and installed by following the methods outlined in <u>AS 1288-2006 'Glass in buildings - Selection and installation'</u>

Safety glass used in buildings should be manufactured to <u>AS/NZS 2208:1996 'Safety glazing materials in buildings'</u>. Safety glass that has been tested to this Standard should be cut and marked by following the methods outlined in <u>AS/NZS 4667:2000 'Quality requirements for cut-to size and processed glass'</u>. The manufacturing Standard for glass used in land vehicles (e.g. motor vehicles, trucks, buses, trains, ferries and trams) is AS/NZS 2080:2006 'Safety glazing for land vehicles'.

#### **Paints**

Australian test methods for Paints are included in the <u>AS 1580</u>, <u>AS/NZS 1580</u> and the <u>AS 3730</u> series of Standards. Information on properties of paints used in buildings and methods used to apply these types of paints is included in AS/NZS 2311:2009 'Guide to the painting of buildings'

# Flooring and Tiles

There is a wide variety of Standards for floor coverings, ceramics and natural stone tiles. These Standards define manufacturing requirements, installation methods, fire properties and slip resistance details for different types of floor coverings.

# **Floor Coverings**

There are a number of Australian Standards® for different types of <u>textile floor coverings</u>. The ideal product for organizations requiring information on tolerances, installation and labelling requirements for textile floor coverings and tiles is the FLOOR SET-2008 'Flooring Standards Set'

There are no current Australian Standards® for resilient and laminate floors. A list of European Standards for resilient floors is available.

Textile floor coverings (carpets) supplied in Australia should be designed to meet critical radiant flux tests. Critical radiant flux tests are designed to measure fire hazard properties for floor coverings. Critical radiant flux tests are outlined in <u>AS ISO 9239-1:2003 'Reaction to fire tests for floor coverings - Determination of the burning flux levels for flooring materials'</u>. Critical radiant flux levels for floor coverings are included in Table 1 to Section C1.10a of Volume 1 to the Building Code of Australia.

# Ceramic (Mosaic and Porcelain Tiles)

Information covering dimensions, physical properties, chemical properties and marking requirements for ceramic tiles is included in <u>AS 4662-2003 'Ceramic tiles - Definitions, classification, characteristics and marking'</u>. Ceramic tiles also need to be tested to the <u>AS 4459</u> series of Standards. The installation Standard for ceramic tiles is <u>AS 3958.1-2007 'Ceramic tiles - Guide to the installation of ceramic tiles'</u>. *Natural Stone Tiles* 

There are no Australian Standards® for natural stone tiles. Information covering manufacturing Standards for natural stone tiles is covered by the European Standards listed below.

- I.S. EN 12057:2004 'Natural Stone Products Modular Tiles Requirements'
- I.S. EN 12058:2004 'Natural Stone Products Slabs for Floors and Stairs Requirements'
- I.S. EN 12059:2004 'Natural Stone Products Dimensional Stone Work Requirements'

Information covering design and installation requirements for natural stone tiles is included in the British Standards listed below.

BS 5385-1:2009 'Wall and floor tiling. Design and installation of ceramic, natural stone and mosaic wall tiling in normal conditions. Code of practice'

BS 5385-2:2006 'Wall and floor tiling. Design and installation of external ceramic and mosaic wall tiling in normal conditions. Code of practice'

BS 5385-5:2009 'Wall and floor tiling. Design and installation of terazzo, natural stone and agglomerated stone tile and slab flooring. Code of practice'

BS 8000-11.2:1990 'Workmanship on building sites. Code of practice for wall and floor tiling. Natural stone'

#### Slip Resistance

Information covering pendulum and ramp slip resistance tests for surfaces are included in <u>AS/NZS 4586:2004 'Slip resistance classification of new pedestrian surface materials'</u> and <u>AS/NZS 4663:2004 'Slip resistance measurement of existing pedestrian surfaces'</u> 6 April 2010 22 A list of recommended slip resistance ratings for materials used in different types of buildings is included in <u>HB 197:1999 'An introductory guide to the slip resistance of pedestrian surface materials'</u> and the draft Australian Standard® <u>DR 07066 'Slip resistance classification of new pedestrian surface materials'</u>.

#### **Disabled Access Standards**

Information covering design requirements and circulation spaces for buildings required to cater for disabled persons are included in the <u>AS 1428</u> series of Standards. These Standards are also available in a set. The document number for the set is <u>AS 1428 (Set)-2003 'Design for access and mobility Set'</u> Minimum design requirements and circulation spaces for buildings requiring access for disabled persons are included in <u>AS 1428.1-2009 'Design for access and mobility - General requirements for access - New building work'</u>. The 2001 edition of <u>AS 1428.1</u> is still referenced in the Building Code of Australia. Access requirements for buildings designed to required to exceed the minimum requirements specified in <u>AS 1428.2-1992 'Design for access and mobility - Enhanced and additional requirements - Buildings and facilities'</u>

The disabled access Standard for buildings where disabled children and adolescents are accessing, or may require access to, is <u>AS 1428.3-1992 'Design for access and mobility - Requirements for children and adolescents with physical disabilities'</u>

Information covering design, location and sizing requirements for warning and directional tactile ground surface indicators commonly used on handrails, stairways and access areas for public transport facilities

to assist persons with visual impairment are included in <u>AS/NZS 1428.4.1:2009 'Design for access and mobility - Means to assist the orientation of people with vision impairment - Tactile ground surface indicators'</u>. The 1992 edition of <u>AS 1428.4</u> is still referenced in the Building Code of Australia. Australian Standards® <u>AS 4226-2008 'Guidelines for safe housing design'</u> and <u>AS 4299-1995 'Adaptable housing'</u> provide information on procedures that can be followed to modify residential buildings to cater for disabled persons.

In March 2010, the Australian Government released the Disability (Access to Premises - Building) Standards 2010 (Premises) report defining performance requirements and technical specifications to ensure disabled persons have equal and dignified access to buildings. It is anticipated that the Premises Standards will be operational in May 2011, to align with the 2011 release of the Building Code of Australia. Frequently Asked Questions about the proposed legislation are available

#### **Fencing**

# **Swimming Pool Fences**

Information covering requirements for swimming pool fences is included in <u>AS 1926.1-2007 'Swimming pool safety - Safety barriers for swimming pools'</u> This edition of the pool fencing Standard is referenced under State building and environmental legislation. The previous edition of the Standard (<u>AS 1926.-1993 'Swimming pool safety - Fencing for swimming pools)</u> is still referenced in the 2009 edition to the Building Code of Australia.

Location requirements for pool fences are included in <u>AS 1926.2-2007 'Swimming pool safety - Location of safety barriers for swimming pools'</u> This edition of AS 1926.2 is referenced under State building and environmental legislation. The 2009 edition to the Building Code of Australia still references <u>AS 1926-1995 'Swimming pool safety - Location of fencing for private swimming pools'</u>

# **Security Fences**

The Australian Standard® for fences manufactured from chain link fabric is <u>AS 1725-2003 'Chain-link fabric security fencing and gates'</u>. Installation details and dimensions for security fences are also included in this Standard. Chain-link fencing materials and mesh used to produce security fences should be manufactured to <u>AS 2423-2002 'Coated steel wire fencing products for terrestrial, aquatic and general use'</u> Steel tubes used to produce security fences should be manufactured to <u>AS 1163-1991 'Structural steel hollow sections'</u>

# **Bushfire-prone areas**

The Australian manufacturing Standard for building products located in bushfire prone areas is <u>AS 3959-2009 'Construction of buildings in bushfire-prone areas'.</u> The publication <u>HB 330-2009 'Living in bushfire-prone areas'</u> is the handbook to <u>AS 3959-2009</u>. Both publications are available in the <u>Bushfire Set-2009 'AS 3959-2009</u>. Construction of buildings in bushfire-prone areas and HB 330-2009. Living in bushfire-prone areas Set'

The publication <u>HB 330-2009</u> provides essential information for owners of existing buildings, existing buildings with planned alterations and extensions and new buildings located in bushfire areas. The publication summarizes information that will assist Home Owners, Builders, Building Certifiers, Town Planners, Architects, Local Councils and Fire Authorities.

Australian Standard® <u>AS 3959-2009</u> and <u>HB 330-2009</u> provide information on construction methods for buildings located in Very Low, Low, Moderate, High, Very High and Extreme Bushfire Attack Levels (BAL). A table summarizing these levels is included in <u>AS 3959-2009</u> and <u>HB 330-2009</u>

Heat flux levels for materials used to construct buildings located in Bushfire Attack Levels are included in <u>AS 3959-2009</u> and <u>HB 330-2009</u> The test methods listed below are used to determine heat loads and flux levels for materials used to construct buildings located in bushfire-prone areas.

AS 1530.8.1-2007 'Methods for fire tests on building materials, components and structures - Tests on elements of construction for buildings exposed to simulated bushfire attack - Radiant heat and small flaming sources'

AS 1530.8.2-2007 'Methods for fire tests on building materials, components and structures - Tests on elements of construction for buildings exposed to simulated bushfire attack - Large flaming sources'

A list of Frequently Asked Questions and replies to these questions for owners of buildings located in bushfire-prone areas is included in Appendix B of HB 330-2009

A diagram summarizing materials used to construct buildings located in bushfire-prone areas is also included in <u>HB 330-2009</u> Detailed information on construction requirements for these types of buildings is included in AS 3959-2009

#### **Fire Tests**

Building materials supplied in Australia should be approved to different types of fire tests detailed in the <u>AS 1530 series</u> of Standards.

# Fire Tests – Combustibility, Flammability. Ignitability, Heat Release and Smoke Release Tests (*Early Fire Hazard Properties*)

The test methods listed below are used to measure fire hazard properties for building products. A list of ratings covering fire hazard properties for building materials located in different classes of buildings is included in the Building Code of Australia.

AS 1530.1-1994 'Methods for fire tests on building materials, components and structures – Combustibility test for materials'

AS 1530.2-1993 'Methods for fire tests on building materials, components and structures - Test for flammability of materials'

AS/NZS 1530.3:1999 'Methods for fire tests on building materials, components and structures - Simultaneous determination of ignitability, flame propagation, heat release and smoke release' A definition for the term "fire hazard properties" is included in HB 50-2004 'Glossary of building terms'.

# Fire Tests – Fire Resistance Levels for Building Materials

Structural adequacy, integrity and insulation tests are to measure fire resistance levels for different types of building products. These levels are expressed in 30 minute, hourly, 90 minute and 2 hour fire resistance tests.

A list of fire resistance tests for materials located in different classes of buildings is included in the Building Code of Australia. Fire resistance tests for building materials are included in <u>AS/NZS</u> 1530.4:2005 'Methods for fire tests on building materials, components and structures - Fire-resistance test of elements of construction. *Fire Doors and Roller Shutters* 

The Australian manufacturing Standard for fire doors and roller shutters is <u>AS 1905.1-2005 'Components for the protection of openings in fire-resistant walls - Fire-resistant doorsets'</u> Fire doors and roller shutters should be tested to <u>AS 1530.4-2005 'Methods for fire tests on building materials, components and structures - Fire-resistant test of elements of construction' and <u>AS 1530.7-2007 'Methods for fire tests on building materials, components and structures - Smoke control assemblies - Ambient and medium temperature leakage test procedure'</u></u>

#### **Wet Area Membranes**

#### **General Information**

There are Australian Standards® for internal and external wet area membranes.

# Wet Area Membranes Used In Bathrooms, Kitchens and Laundries (Internal Wet Area Membranes)

Information on processes used to design and install membranes and flashings located in bathrooms, kitchens and laundries located in residential buildings is included in <u>AS 3740-2004 'Waterproofing of wet areas within residential buildings'</u>. The primary purpose of the Standard is to define processes used to waterproof areas where floor wastes are used. A flowchart summarizing methods used to achieve compliance to this Standard is included in Appendix A of <u>AS 3740-2004</u>.

Information on waterproofing methods for wet areas is also included in Section 3.8 to Volume 2 of the Building Code of Australia. This section of the Building Code indicates all waterproofing in residential buildings should follow the details that are included in AS 3740-2004.

The Australian manufacturing Standard for membranes used in residential buildings is <u>AS/NZS 4858:2004 'Wet area membranes'.</u>

# Waterproofing Membranes Used on the Outside of Buildings

Information covering manufacturing requirements for exposed and protected membranes that are designed to form waterproof barriers on the outside of buildings are included in <u>AS 4654.1-2009</u> 'Waterproofing membrane systems for exterior use - Above ground level - Materials'. Waterproofing membranes used for exterior applications should be designed and installed by following the principles outlined in <u>AS 4654.2-2009</u> 'Waterproofing membrane systems for exterior use - Above ground level - Design and installation'

#### Design

#### **General Information**

Australian building design Standards are based on 'limit state' design engineering principles. Limit state design principles are used to assess the ability of structures and structural elements to perform adequately in normal use. Probability methods are used to evaluate the reliability of structures to perform adequately in normal use. These probability methods are summarized in the Standards listed below:

AS/NZS 1170.0:2002 'Structural design actions - General principles'

AS 5104-2005 'General principles on the reliability of structures'

AS ISO 8930-2005 'General principles on reliability of structures - List of equivalent terms'

AS ISO 13822-2005 'Basis for design of structures - Assessment of existing structures'

ISO 13823:2008 'General principles for on the design of structures for durability'

Engineering principles used to determine loads for structures are included in the <u>AS/NZS 1170 series of Standards</u>. These publications are also available in a set <u>(AS/NZS 1170 Set:2007 'Structural design actions Set')</u>. The wind loading Standard for residential buildings is <u>AS 4055-2006 'Wind loads for housing'</u>.

#### **Concrete Structures**

The Australian Standard® structural design Standard for precast and reinforced concrete is <u>AS 3600-2001 'Concrete structures'</u>. The Australian design Standard for tilt-up concrete is <u>AS 3850-2003 'Tilt-up</u> concrete construction'.

There are also handbooks for structures manufactured from precast and reinforced concrete products.

HB 64-2002 'Guide to concrete construction'

HB 71-2002 'Reinforced concrete design in accordance with AS 3600-2001'

NP:PCH-2009 'Precast Concrete Handbook'

# **Masonry Structures**

The Australian engineering Standard for masonry structures is <u>AS 3700-2001 'Masonry structures'</u> There is also a commentary to this Standard, <u>AS 3700 Supp 1-2004 'Masonry structures - Commentary'</u>. <u>AS 3700 Set-2007 'Masonry structures Set'</u> includes both of these publications.

<u>AS 3700 Set-2007</u> includes a copy of <u>AS 3700-2001</u> and <u>AS 3700 Supp 1-2004</u> <u>Formwork</u>

The Australian design Standard for formwork is <u>AS 3610-1995 'Formwork for concrete'</u> Charts for different types of formwork finishes are included in <u>AS 3610 Supp 1-1995 'Formwork for concrete - Blowhole and colour evaluation charts (Supplement to AS 3610-1995)</u> There is also a commentary to <u>AS 3610-1995</u>, (AS 3610 Supp 2-1996 'Formwork for concrete - Commentary (Supplement to AS 3610-1995)

#### **Steel Structures**

There are structural design Standards for hot-rolled steels, cold-formed steels and stainless steels. The structural design for hot rolled steels is <u>AS 4100-1998 'Steel structures'</u> The commentary to this Standard is <u>AS 4100 Supp 1-1999 'Steel structures - Commentary (Supplement to AS 4100-1998)'</u> There are two Standards for cold-formed steel structures: 6 April 2010 29 <u>AS/NZS 4600:2005 'Cold-formed steel structures'</u> AS/NZS 4673:2001 'Cold-formed stainless steel structures'

#### **Timber Frames and Timber Structures**

Building and design requirements for timber frames used in single and two storey residential buildings are included in the Standards listed below. These Standards cover requirements for timbers that are visually graded (F) and mechanically graded (MGP) timbers.

AS 1684.1-1999 'Residential timber-framed construction - Design criteria'

AS 1684.2-2006 'Residential timber-framed construction - Non-cyclonic areas'

AS 1684.3-2006 'Residential timber-framed construction - Cyclonic areas'

AS 1684.4-2006 'Residential timber-framed construction - Simplified - Non-cyclonic areas'

The engineering Standard for different types of structural timber is <u>AS 1720.1-1997 'Timber structures - Design methods'</u>. The installation Standard timber trusses is <u>AS 4440-2004 'Installation of nailplated</u> timber trusses'

Residential Slabs and Footings

The design Standard for residential slabs and footings is <u>AS 2870-1996 'Residential slabs and footings - Construction'</u>

Composite Structures

The design Standard for beams manufactured from steel and concrete (composite materials) is <u>AS</u> 2327.1-2003 'Composite structures - Simply supported beams'

#### **Bridges**

Bridge design Standards are covered by the <u>AS 5100</u> series of Standards. These Standards are also included in <u>AS 5100 Set-2007 'Bridge Design Set'</u>

#### Glass

The design and installation Standard for glass used in buildings is <u>AS 1288-2006 'Glass in buildings - Selection and installation'</u> Span tables for the types of glass included in this Standard are included in <u>AS 1288 Supp 1-2006 'Glass in buildings - Selection and installation (Supplement to AS 1288-2006)'</u>

The above publications are included in <u>AS 1288 Set-2006 'Glass in buildings Set'</u> and <u>AS 1288 PLUS (CD) Set-2006 'Glass in buildings PLUS CD Set'</u>

The handbook to AS 1288-2006 is HB 125-2007 'The glass and glazing handbook (including guide to AS 1288, Glass in buildings - Selection and installation)

#### **Demonstrating Compliance with Australian Standards®**

There are a number of methods available to those wishing to demonstrate compliance with Australian Standards®.

#### **Self Declaration**

Self-declaration is a process whereby the manufacturer or supplier of a product simply declares or claims that its product complies with a specific Australian Standard®. In providing self-declaration, the manufacturer may have commissioned an opinion or report from an independent expert with relevant theoretical and practical skills acquired through training, qualification and experience. However, such reports or opinions are often technically detailed and may not be available to consumers, users or others wishing to verify a manufacturer's claims.

# Third Party product certification: ISO Type 1 Schemes (Type Testing Schemes)

This is a commonly applied method that involves the commission of an independent relevantly accredited test report of a sample of product, prepared by an appropriate test facility, that is then reviewed for compliance with the requirements of the Standard. The result of this process is often referred to as a 'Type Test Certificate' that may provide a user or stakeholder with an enhanced level of confidence in a manufacturer's or supplier's claims of compliance.

# Third Party product certification: ISO Type 5 Schemes

Manufacturers, importers and suppliers of products who wish to provide a higher level of confidence to stakeholders in their claims of compliance, may wish to seek an independent third party to procure testing of an initial sample of product and undertake an audit of the manufacturing facilities and processes, followed by ongoing batch / surveillance testing of products, and ongoing audits at regular intervals. This is generally referred to an ISO Type 5 product certification scheme. For more information on ISO Type 5 principles, we recommend the Australian publication HB 18.67-2005 'Conformity assessment – Fundamentals of product certification', which is based on ISO/IEC Guide 67:2004.

# How SAI Global Can Help...

SAI Global Limited is the largest provider of third party product certification services in Asia Pacific, and is accredited against a broad range of Australian and International Standards, via its wholly owned subsidiary SAI Global Certification Services Pty Limited.

Please note that SAI Global is not a testing facility. A list of accredited testing facilities in Australia and neighbouring areas is available from the <u>National Association of Testing Authorities (NATA)</u>. A list of overseas bodies approved to manage laboratory accreditation schemes is available from the <u>International Laboratory Accreditation Cooperation</u>.

# **Product Certification Schemes**

SAI Global Product Certification Services provides third party assurance that a particular product meets the specified requirements of a nominated product Standard. The SAI Global StandardsMark™ on the product represents reliability, quality assurance and safety.

There is a range of product certification schemes that help you to demonstrate compliance to building Standards with more confidence.

NB: The first step in commencing any certification process is to know and understand the Standards that are relevant to you.

# ISO Type 5 "StandardsMark™" Scheme

The <u>SAI Global ISO Type 5 Scheme</u> is often referred to as the "5 Ticks Product StandardsMark™" scheme, and is applicable to a wide range of products and Standards. The StandardsMark™ scheme covers the following areas:

The procurement of testing of initial sample of products by independent accredited laboratories. Laboratory tests are completed under an ISO Type 1 scheme.

Verification by SAI Global of test reports. Issue of detailed Audit Report, StandardsMark™ Certificate and , if desired by the client, a licence to affix StandardsMark™ labels onto their certified products

Initial and ongoing surveillance auditing of the manufacturing facilities and processes including ongoing batch and surveillance testing of products.

# CodeMark Scheme

SAI Global is accredited to certify manufacturers of building products under the <u>CodeMark</u> scheme. Post and Marking Scheme for Safety Glass

The <u>Post Cutting and Marking Scheme</u> (an ISO Type 5 Scheme) has been designed specifically for manufacturers or suppliers to demonstrate compliance to <u>AS/NZS 4667:2000 'Quality requirements for cut-to-size</u> and processed glass'

#### **Online Resources**

See here for a list of <u>online resources</u> used to locate legislation, Government Departments, Law Foundations and Institutes.

<u>Do you need online access to the Building Code of Australia and all the Australian Standards®</u> referenced within it?

Do you need guidance on which Australian Standards® or parts thereof are referred to in legislation? Would you like to be notified when Standards relevant to you are updated, amended or newly released? Do you need online access to the full text of your own customised selection of Australian Standards® as well as optional access to international Standards?

<u>Do you need to stay current on Australian Legislative, Regulatory and Compliance News?</u>

<u>Would you like to drive continued organizational success with results-focused training and professional development?</u>

# **Building Regulators**

Australian Building Codes Board
NSW Department of Planning
Building Commission (Victorian Building Regulator)
Planning SA
WA Department of Regional Development and Lands
Workplace Standards Tasmania
ACT Planning and Land Authority
Northern Territory Lands Group
Northern Territory Department of Lands and Planning

#### **Customer Service**

Information Services Division
Standards & Technical Information Group

Within Australia: 131 242 (Press 1)

Outside Australia: +61 2 8206 6010 (Press 1)

sales@saiglobal.com

Be alerted when Standards change

Construction Materials and Building Standards

#### **Assurance Services Division**

Product Certification Group Within Australia: 1300 360 314 Outside Australia: +61 2 8206 6000

product@saiglobal.com

Building Products Certification Services
Product Certification Key Documents

www.saiglobal.com/.../Standards/...Standards/Australian Standards and Building Products.pdf