

Adhesive Guide



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This document is an overview of the current Australian standards pertaining to the adhesives used in the manufacture of finger-jointed and or laminated timber products (i.e. Design Pine).

The following pages illustrate where and how these products can be used in their end applications.

Design Pine is manufactured under a strict production guideline that ensures every product meets all necessary Australian Standards. Design Pine is manufactured for the use in fully exposed above ground exterior applications and uses only SERVICE CLASS 3 adhesives.

Structural Finger Joint and or Laminated Products

Structural Finger Jointed (F7) – no laminate

Standard #: AS5068

Service Class 2

Finger Joint Adhesive: Type 1 or 2

Service Class 3 - Design Pine

Finger Joint Adhesive: Type 1

Structural Finger Jointed (GL8) – laminated

Standard #: AS/NZS 1328.1/2

Service Class 2

Finger Joint Adhesive: Type 1 or 2

Laminate Adhesive: Type 1 or 2

Service Class 3 - Design Pine

Finger Joint Adhesive: Type 1

Laminate Adhesive: Type 1

Adhesive Types:

Standard #: AS5068 and AS/NZS 1328.1/2 list these adhesives as type 1 or 2

Adhesives for structures in Service Class 3 shall satisfy the climatic performance requirements for a Type I adhesive classification as defined in AS/NZS 4364:2010

Australian Standard #: AS/NZS 1328.1/2

Adhesives for structures in Service Class 3 shall satisfy the climatic performance requirements for a Type I adhesive classification as defined in AS/NZS 4364:2010

Examples of Type 1 adhesives listed in the above Australian Standards are:

Resorcinol, Phenol-resorcinol formaldehyde, Tannin formaldehyde

Service Classes Definitions

Service Class 1 (SC1) = Interior

Service Class 1 is characterised by a moisture content in the material corresponding to a temperature of 20°C and relative humidity of the surrounding air only exceeding 65% for a few weeks per year

NOTE: In Service Class 1 the average equilibrium moisture content is most softwoods will not exceed 12%

Service Class 2 (SC2) = Interior Humid, Exterior protected (outside under roof)

Service Class 2 is characterised by a moisture content in the material corresponding to a temperature of 20°C and relative humidity of the surrounding air only exceeding 85% for a few weeks per year

NOTE: In Service Class 2 the average equilibrium moisture content is most softwoods will not exceed 20%

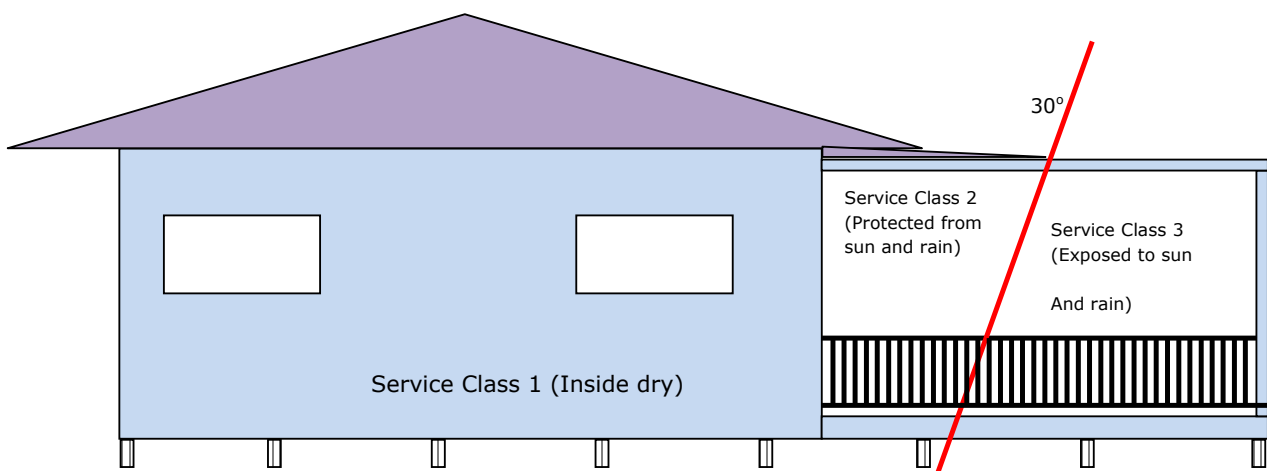
Service Class 3 (SC3) = External Exposed (outside fully exposed to weather)

Service Class 3 is characterised by a climatic conditions leading to higher moisture content than Service Class 2, or where timber is directly exposed to sun and/or rain

NOTE: Figure 1 illustrates timber exposed to sun and rain

Service Class	Description	Timber e.m.c	Temperature
1	Interior Dry	< 12%	< 50°C
2	Interior Humid, Exterior Protected	< 20%	Any
3	Interior Hot and Humid Exterior Exposed	>18% untreated timber >20% multi salts treated softwood	Any

e.m.c = equilibrium moisture content: When subject to given conditions of humidity and Temperature, timber will reach equilibrium moisture content (EMC), at which it neither gains nor loses moisture while the conditions are maintained.



Refer AS5068 Pg 6

All relevant Australian Standards for the production of Design Pine products are listed below.

Structural Products

Finger Joints -

AS5068 – Timber – Finger joints in structural products – Production requirements

Lamination

AS/NZS1328.1, – Glue laminated structural timber – performance requirements and minimum production requirements

AS/NZS1328.2 – Glue laminated structural timber – guidelines for AS/NZS 1328: part 1 for the selection, production and installation of glue laminated structural timber

Treatment

AS/NZS1604.1 – Specification for preservative treatment

AS/NZS1604.5 – Specification for preservative treatment – glue laminated timber products

Structural Testing

AS3519 - Timber - Machine proof grading

AS1720 – Timber Structures design Methods

Adhesives

AS/NZS 4364 – Timber - Bond performance of structural adhesives

Non Structural Products

Finger Joints

AS5069 – Timber – finger joints in non structural products – production requirements

Lamination

AS5067 – Timber – Non structural glued laminated – performance and production requirements

Treatment

AS/NZS1604.1 – Specification for preservative treatment

AS/NZS1604.5 – Specification for preservative treatment – glue laminated timber products

Adhesives

AS/NZS 4364 – Timber - Bond performance of structural adhesives

Any further questions?

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