

NAILPLATE DURABILITY



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There are a number of frequently asked questions relating to the use of roof and floor trusses in environments other than the normal internal domestic applications.

These are as follows:

Can I use nailplated trusses in an exposed situation?

No - corrosion is not the major issue here.

The concern is when timber is exposed to the weather it expands and shrinks as it wets and dries.

The effect of this on the nailplates is to cause them to 'walk out' of the timber.

Go to any truss plant that has a model truss attached to the front wall or fence - if you look closely you'll find that the plates have walked out, or have been screwed in back in with screws.

Will screws stop nailplates from walking out of the timber?

No - as can be seen from the photograph, screws are often used to drive nailplates home after they have walked out due to weathering.

This technique may only be used to repair a weathered truss, which will be protected in the future, but it requires an engineer to re-design the joints.

Can I use nailplates in CCA treated timber?

CCA salts accelerates the corrosion of metal particularly when the timber is still wet following treatment. However, where the timber is dry and the truss is used in an enclosed building such that the timber moisture content doesn't rise above around 20 per cent then the CCA remains inert and no corrosion occurs.

CCA treatment increases the water absorption of timber and compounds the 'walk out' of connectors if exposed to the weather.

Can I use nailplates in LOSP treated timber?

LOSP treatment to level H2 does not affect the connector performance.

When using timber treated to a higher level of protection you should contact your nail plate supplier as this extra treatment may affect the tooth holding capacity.

The solvents used in LOSP treatment will not react with galvanizing or steel so will have no effect on corrosion.

Can I use nailplated trusses over a swimming pool?

Yes - but extra corrosion protection is required.

Stainless steel connectors, although

providing protection against rust, do suffer what is termed 'stress corrosion', which occurs in environments that may exist in some enclosed swimming pools.

(For further information on the methods of protecting connector plates in swimming pool environments refer to DataTRUSS reference sheet DTRS-0028.)

Can I use nailplated trusses in a chemical processing plant?

That will depend on the chemicals. The things to check are the effect the chemical has both on the timber involved and the steel of the nailplates.

Some chemicals are quite aggressive to some species of timber so some treatment or a different species would be required.

Depending on the application stainless steel nailplates are definitely an option, particularly in salty atmosphere such as near the coast.

Stainless steel nailplates are obviously much more expensive than equivalent galvanised connectors, however, combined with the fact that timber is unaffected by many chemicals, a low maintenance structure can be constructed relatively inexpensively compared to alternatives.

