

NAIL PLATES - USE IN CORROSIVE ENVIRONMENTS

Date: 09/08/2019

Reference: RD.2.02.02

Roof Trusses are sometimes requested in areas where the nail plates could be exposed to corrosive environments such as swimming pools, or other areas where chemicals are used.

MiTek do not recommend the use of trussed rafters at all over swimming pools or similar environments as the hostile atmosphere in the pool can cause distress to both the nail plates and timber.

If timber trussed rafters must be used for a particular reason then MiTek recommend the following;

RECOMMENDATIONS

1. **Stainless steel nail plates should not be used.** Evidence shows that galvanised steel nail plates have less risk of corrosion in chlorine environments, so MiTek would always recommend the use of galvanised nail plates in corrosive exposure areas.
2. **Apply a protective coating to the nail plates.** The nail plates on all truss joints should be cleaned to remove any oil, and then a minimum of two layers of a proprietary chlorinated rubber paint should be applied, to seal the steel and galvanised coating away from the hostile atmosphere.
3. **Install a ceiling.** On no account should trussed rafters be used over corrosive environments without a ceiling. Beyond the ceiling, fix two layers of vapour barrier with taped joints at all edges, joints, and holes for light fixings, etc. This is to prevent the hostile atmosphere entering the roof space, as best as possible.
4. **Ensure the roof space is adequately ventilated.** This may also include consideration to installation of a small air pump to pass fresh air into the roof space. This will provide a positive air pressure in the roof void, which will help prevent ingress of the corrosive environment into the roof space, and help ventilation.
5. **Inspect the roof trusses regularly.** The Building Designer should draw up a strict inspection plan that must be adhered to, so that the roof trusses are inspected regularly. Any deterioration in the nail plates or timber should be remedied immediately.

Irrespective of the above, it remains the Building Designer's responsibility to ensure that products and materials specified are suitable for their intended use and environment. Neither MiTek, nor the Trussed Rafter Supplier will accept responsibility for any claim from the Building Designer's failure to meet this requirement.

If this guide is missing any information or you need further assistance, please call the Pamir Helpdesk on 01384 451446