

# NTN 018

## On-site treatment of bolt heads and nuts

**Nullifire**  
Smart Protection

### Statement

When erecting steel structures nuts and bolts are the most common means of fixing the connections. Once in place consideration should be given to the protection of these bolts. Typically bolts may be plain steel or could be treated in some way:

- Black Bolts - untreated steel bolts
- Galvansied Bolts - hot-sipped galvanised steel bolts
- Sheradised Bolts - zinc coated (via thermal deposition) bolts
- Greenkote Bolts - zinc/alumimum coated (via thermal deposition) bolts

Based on extensive experience Nullifire would offer the following advice for the treatment of bolts:

The preparation of a surface to be painted is critical; it is a long established and well documented fact that most premature coating failures are due to poor substrate preparation.

Almost without exception the best form of surface preparation is abrasive blast cleaning but it is recognised that to specify blast cleaning for bolts may be impractical and unrealistic.

Nullifire Technical therefore suggest the following alternative preparation for bolts.

Where corrosion protection is required:

Environment	Surface Preparation	Coating System
C1 & C2	Remove any contamination such as zinc salts then degrease with a good degreaser. Thoroughly dry the nuts and bolts.	Apply the same coating scheme to the bolts as used on the steelwork.
C3, C4 and C5	As for C1 and C2; Black Bolts should be mechanically prepared to St3.  Galvanised and Sheradised Bolts should be treated with a modant wash.  Greenkote Bolts should be degreased.  Thoroughly dry the nuts and bolts.	An approved primer should be used. This should be followed by the build coat and/or finish used on the steelwork.

Consult the Nullifire team for advice on approved primers and topcoats.

Where the bolts connects elements with different intumescent thickness requirements, the lower thickness may be applied to the bolts, e.g. column dft 600µm and beam dft 500µm, apply 500µm to the bolts.

### Technical Service

Nullifire has a team of experienced Technical Sales Representatives who provide assistance in the selection and specification of products. For more detailed information, service and advice, please call Technical Services on +44 (0) 1942 251 400.

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