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Tapon Bolt Caps Installation Guide

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1.1 INTRODUCTION

This Installation Guide contain advice on application of Tapon Bolt Caps.

Passive fireproofing materials prevent potentially catastrophic structural failures from occurring by providing an insulating shield against the intense heat of a fire. This document is subject to the following:

1. Compliance with individual country standards regarding fire resistance.
2. All equipment being suitable and fully serviced prior to use with Tapon Bolt Caps.
3. All health and safety requirements being met.

2. SYSTEM DESCRIPTION

Tapon Bolt Caps consist of a factory manufactured self extinguishing thermosetting polymeric material with corrosion resistant clipping mechanism.



Figure 1. Tapon Bolt Cap

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Figure 2. Tapon Bolt Cap Clip Mechanism

The Tapon Bolt Caps are specifically designed to provide protection to bolted connections in an interior environment. The Caps are factory manufactured to specific imperial and metric structural bolt sizes and have been fire tested in accordance with BS 476 part 20, UL1709 and ISO 22899 test methods.

3.1 PACKAGING

The Tapon Bolt Caps are supplied in factory sealed bags. The factory bags will contain pertinent shipping and manufacturing information such as

- bolt cap size in metric or imperial units
- manufacturing lot number, date and cap color
- MSDS

The Tapon Bolt Caps have an indefinite shelf life. Unused caps should be resealed in the factory bag or in a designated container that is clearly marked and identified as Tapon Bolt Caps with designated size, lot# and MSDS.

4.0 SURFACE PREPARATION

The Tapon Bolt Caps do not require specific surface preparation to provide fire protection. If required, the surface preparation and primer application is in accordance with the specified manufacturer recommendation.

Tapon Bolt Caps can be installed directly to primed carbon or galvanized steel bolted connections.

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5.1 INSTALLATION

The Tapon Bolt Caps can be installed at any phase in the construction sequence.

- Steel erection
- Application of fireproofing
- Application of topcoat

Prior to installation of the bolt caps it should be verified that the bolted connections are complete and installed in accordance with the project specification.



Figure 3. Installed bolted connections.

Before use, each bolt cap should be visually inspected for:

- Cracks and gross discoloration of the polymeric bolt cap material.
- Missing corrosion resistant clips on the inside of the bolt cap.

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Any defective bolt caps shall be segregated and returned to Typhoon Performance ProductsLtd for replacement. Ensure that the bolt cap is the correct size designation for the bolted connection (bolt and nut).

The Tapon Bolt Caps are designed to the protection of hexagon shaped bolt heads and associated hexagon shaped nuts.



Figure 4. Hexagon shaped bolt head

Line up the open bottom end of the Tapon Bolt Cap over the bolt head and align the mechanical clips over the bolt head sharp edge.



Figure 5. Aligning the Tapon Bolt Cap

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Firmly tap the Tapon Bolt Cap onto the bolt head using a rubber head mallet and engage the mechanical holding clips. Do not use hard head hammers or mallets that could damage the bolt cap during installation.



Figure 5. Installing the Tapon Bolt Cap.

Continue to firmly tap the Tapon Bolt Cap until the clips are fully engaged and the bolt cap is tight against the steel substrate.

Grasp the engaged Bolt Cap and attempt to twist and pull the cap off the bolt head. Properly installed Tapon Bolt Cap cannot be removed without considerable force.

Repeat the same installation procedure for the associated hexagon shaped bolt nut.



Figure 6. Properly installed bolt caps

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If Required in external environments:

As an additional seal against the elements, apply a bead silicone caulk around the outside edge of the Tapon Bolt Cap and onto the surrounding passive fireproofing material.

6.0 TOPCOATS

Tapon Bolt Caps are supplied in standard off-white color and then color matched using an approved topcoat coating. Prior to application of the topcoat coating, contact the specified coating manufacturer for acceptance and compatibility.

Approved topcoats are applied in accordance with the manufacturer recommendations. Prior to application, insure that the Tapon Bolt Cap surface is clean from dust, dirt grease, oils or any surface contaminant that would interfere with the bonding of the topcoat system.

7.0 REPAIR OF DAMAGE CAPS

Damaged bolt caps during construction and the service will require complete removal of the installed cap.

Visually inspect the installed bolt cap for cracks, chips, missing sections, material flaking or sagging caps.

Any defect found during visual inspection are mechanically removed using chisel, steel hammer, or any mechanical means to cleanly and safely remove the damaged bolt cap.

Properly install a new Tapon bolt cap in accordance with the above Installation Instructions.

8.0 SAFETY AND ENVIRONMENT

Appropriate Material Safety Data Sheets and local Health and Safety personnel protection equipment must be observed for all materials used.

Refer to local legislation and the manufacturer's specific instructions regarding equipmentsafety.

Refer to local regulations for proper disposal of Tapon Bolt Caps and seek the advice of specialist waste disposal providers.

