Typhoon Products Limited, a British company, has launched a product that removes the uncertainty surrounding the correct protection for connections in steel framed buildings in the event of fire.

Structural steel construction now accounts for about 70% of new high-rise multi-storey buildings, and the use of intumescent paint to protect the steel from fire accounts for about 40% of those structures, driven by the many economic benefits over alternatives such as reinforced concrete. Increasingly, fireproof paint is being applied off-site in factories, so the steel components arrive ready protected for final assembly on site. This has major benefits in terms of quality, time and cost, as well as ensuring compliance with Health and Safety legislation, which is rightly onerous for on-site application of these hazardous chemical products. The latest intumescent paints dry rapidly and provide a tough surface, which need very little on-site remedial work to correct damage. This leaves the question of how to protect the bolted connections on-site.

The correct way to treat the bolts on-site with intumescent paint involves several operations. Cleaning and some type of pre-treatment in the form of priming or etching are essential to ensure the intumescent coating adheres. The intumescent is then applied, normally more than one coat being required to achieve the correct dry film thickness. If carried out correctly, this involves time and access for each task, all of which cannot be achieved in one day. This has considerable cost disadvantages for the contractor, who is always trying to minimise expensive on-site processes. ***The plastic boltcap removes the need for on-site application of intumescent paint to bolted connections.***

Boltcaps are manufactured from a thermoset polymer incorporating a proprietary material developed from research in the advanced materials industry. The proprietary material provides significantly enhanced capability to withstand fire, and allows the manufacture of plastic products that meet all the standard fire test requirements for the construction industry. The raw material, the plastics fabrication and the fastening system are all produced in the UK in ISO standard factories. A range of sizes of boltcaps are available covering all structural bolts commonly in use.

The Boltcap is a quality assured item, easily fitted and visually attractive. It is secured by a powerful clipping mechanism, making it very difficult to remove once fitted properly. When using the Boltcap, preparation of the bolt is not an issue, as the fixing clips will not be affected by contamination. Testing at the Building Research Establishment showed that Boltcaps provided a higher level of protection than the use of intumescent coating.

An additional feature is the ability to check visually that the connections are correctly protected without having to physically measure the coating thickness, particularly useful in areas difficult to access. The Boltcaps can also be used to protect the connections where intumescent coating is applied on-site, and are particularly useful where appearance is paramount.

Fire engineering leads to the use of higher permissible steel temperatures under certain conditions, and this is where the Boltcap should be considered early in the design process, to ensure the connections are kept within safe limits.

For further details contact Peter Loftus on 01744 20909 or via the web site www.boltcap.com