**Issued To:**

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**Issued By:**   **Chris Partington**

**Date:**   **1 November 2020**

**Project Name:**

**Project Location:**

**Structural Elements for Protection:**

Internal Visible Steelwork fire rated up to 60 minutes. Environment up to C2

**Specified Fire Resistance Level:** 30/--/--

**Specified Environments:** C2

**AS1851 Guidelines the intumescent system should have annual Inspection and maintenance as required**

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**Surface Preparation and Application**

**Pre-treatment:**

Degrease surface using biodegradable degreasing solution as per AS 1627.1 to remove all grease, oils, fats, etc. Remove all salt deposits and degreaser residue by low pressure water washing (upwards of 300 bar) using potable water. Grind all sharp edges and corners to a radius of 2mm. Remove all weld slag, spatter, and grind all welds and high spots smooth.

**Steel Preparation:**

Abrasive blast all surfaces to a minimum Sa 2½ blast as per AS1627.4. A surface profile of 40-70 microns shall be achieved. Remove all blast residue. All blasted surfaces shall be coated immediately, before any flash rusting or contamination occurs. Substrate must be sound, clean and dry before application of coatings.

**Galvanized Steel:**

Galvanizing requires a roughened surface for optimum adhesion/performance of epoxy primers. Remove any contaminants per SP1, AS 1627.1; ensure there are no chemical treatments that may interfere with adhesion; and mechanical abrade using bristle blaster or sweep abrasive blast the surface to establish a suitable roughness (typically 40 microns). Avoid aggressive preparation that may remove the zinc coating.

Cleaned and roughened galvanizing should be coated immediately after preparation, particularly in humid conditions above 50% RH.

Do not allow adhesion-compromising zinc hydroxide to form before application.

**Off/On-Site Intumescent Coating Application**

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| **Nullifire SC902**  **Finish Standard Required** | **Location** | **Finish Required** |
| **Internal Steelwork Visible**  **FRL up to 60 minutes up to C2** | **To Be Confirmed by Client.** |

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|  | PRODUCT | DATA SHEET NO. | MINIMUM FILM THICKNESS (MICRONS) | | FRL | APPLICATION METHOD | SPOT/ FULL/ STRIPE COAT | THINNER REQUIRED |
| DRY | WET |
| Primer Coat | Intercure  200 | Intercure 200 | 75 Microns Dry Film Thickness | | N/A | Airless Spray | FULL | As per TDS |
| Stripe Coat | Intercure  200 | Intercure 200 | 75 Microns Dry Film Thickness | | N/A | Brush/Roll | STRIPE | As per TDS |
| Intumescent Coat | Nullifire SC803 | Nullifire SC803 | AS PER LOADING SCHEDULE | | 60/--/-- | Airless Spray | FULL | Water |
| Compatible  Topcoat | Interthane 870 | Interthane 870 | 75 Microns Dry Film Thickness | | N/A | Roller/Brush/Spray | FULL | As per TDS |
| Compatible  Topcoat | Interthane 870 | Interthane 870 | 75 Microns Dry Film Thickness | | N/A | Roller/Brush/Spray | FULL | As per TDS |
| NOTES | Level of finish to be approved by Architect prior to start of project  Intercure 200 can be substituted for Intergard 251HS at the same dft | | | | | | | |

**Intumescent coating warranty documentation can only be requested prior to commencement of works**

**Intumescent Coating:** Apply Nullifire SC902 to meet the DFT requirement for the fire rating specified and in accordance with the product loading schedule provided. Refer to Permax for surface preparation of RHS, SHS and CHS members.

**Technical Note:** An intumescent coating expands in a fire scenario, please consult Permax prior to fixing any material directly to, or hard up against the coated substrate.

**Note:** Galvanized bolts should be abraded, solvent degreased and primed. **(Intumescent bolt caps are also an approved system for fire protection for bolted connections – compliant to AS1530.4-2014 – contact Permax for additional details)**

**Note:** Existing structural steelwork that has been identified as being previously coated with lead-based paint is not suitable for an intumescent coating to be applied to. Lead based paint must first be completely removed by an approved method carried out by a suitably qualified contractor.

**Note:** Nullifire SC803 can only be installed by approved applicators. Applicators also need to hold the necessary qualifications to enable certification of the installed system in accordance with the relevant State regulations.

**Notes**

All materials, primer, intumescent, topcoat shall be obtained from– Nullifire / Azko Nobel

All corners, edges, bolted connections, difficult access should have a stripe coat

All products should be applied as per technical data sheets and application guides

Two topcoats may be required to achieve level of finish and full opacity

Level of intumescent and coating finish should be approved before full application

The intumescent coating shall have been assessed in accordance with the requirements of AS 1530.4 and AS 4100

The potential for heat transfer from unprotected structural steel into protected structural steel must be considered. It is normally considered good practice to protect the adjoining 500mm of ‘unprotected’ structural steel to limit unwanted heat transfer.

All systems should be stored and the project design to be free from ponding and pooling water

All intumescent coating products used shall be documented in the independent NATA laboratory assessment (i.e. Branz)

All bolted connections should be suitably protected with fire rated bolt caps (Assessed to AS1530.4) refer to Permax for supply

The intumescent system should have annual Inspection and maintenance as per AS1851guidelines

An independent 3rd party inspector should be employed on the project

Nullifire SC803 is a water based acrylic intumescent and should be protected from the weather during the construction phase.

If a weather tolerant intumescent is required to cope with the construction environment then Nullifire SC902 should be used