Product Data Sheet

SC902

Intumescent Steel Coating - Fast Track, On-Site and Offsite

Description

SC902 is a low VOC, one coat, high build system, based on patented technology.



Features and Benefits

- Fast cure, even below 0°C, touch dry in 1 hour.
- High solids content.
- Early weather resistance, shower proof within 1 hour.
- High build potential with all ratings possible in one application.
- Fire rating up to 120 minutes tested to BS476 and EN13381: Parts 6, 8, 9 & 10.
- Tested to AS1530.4- 2014, AS4100- 2020.
- Designed for on-site and off-site use.
- Optifire®+ unique traceability identifier.
- Certifire CF5144.
- CE ETA 20/1216.

Usage Purpose

SC902 provides a fast curing fire protection coating for structural steel. SC902 is designed to provide upto 120 minutes fire resistance to 'I' section beams and columns, hollow columns, cellular beams, concrete filled hollow columns and solid steel tension rods. As a fast-track coating, all 120 minute loadings are possible to apply in a single coat and weather resistant in one hour. SC902 can be used on steel, cast iron and galvanised steel.

Packaging

Part A: 22.3 kg drum
Part B: 2.7 kg bottle

Available Colour

Part A - White
Part B - Translucent Black
Mixed - Off-white
Cured - Off-white

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Storage

Store in secure, dry warehouse conditions between +0°C and +35°C

Certificates & Approvals

Certifire CF5144
BS476 Part 20-22
EN13381–8 – Structural Steel
ETA - 20/1216
CE Mark - 2812-CPR-GA5018
Cellular Beams - YB5 & EN13381-9
EN13381-6 Concrete Filled Hollows
EN13381-10 Solid Steel Tension Rods
Australian standards AS4100-2020 and AS1530.4-2014
Japanese standard JIS A1304
(for other certification requirements, contact the Nullifire team at Tremco)

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Technical Characteristics

Average Drying Times (DFT & Temp)	1000 microns DFT @ 20°C	To Touch – 60 minutes To Recoat – 4 hours To Handle – 24 hours These figures are given as guidance only. Other factors such as air movement, temperature and coating thickness must be considered.
Construction Phase		3 months without topcoat once fully dried (see Environmental Resistance section)
Specific Gravity		Part A: 1.55 ±0.02 Part B: 0.99 ±0.01 Mixed: 1.46 ±0.02
Thickness	Recommended thickness per coat (e.g 1,750 g/m² @ 1000 µm DFT) Please consult the Nullifire team at Tremco for advice	As per loading tables
Mix Ratio	Mix Ratio	100:12 by weight 5.6:1 by volume
Pot Life In +20°C	Pot-life or Sprayable Life	60 minutes
Solids Content	Volume Solids	85% ±3
Application Temperature		+5°C to +35°C, relative humidity <95% and a steel surface temperature at least 3°C above the dew point.
Service Temperature		-20°C to +40°C
Environment / VOC		137 g/litre
Finish		Matt
Storage		Store in secure, dry warehouse conditions between 0°C and +35°C
Shelf Life		12 months when stored as recommended in original unopened container at 20°C
Application Instructions		Detailed application instructions are available for SC600, SC800 and SC900 series that must be consulted prior to commencing application. Please consult specific project specification documents.

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Technical Characteristics

Cleaning	Uncured paint can be removed using xylene. Dried on paint may be removed using a paint scraper. Spray equipment must only be cleaned using xylene, or solvents with minimum 80% xylene, and water content must be <0.2%. Higher water contents will lead to gelling in the equipment.

Environmental Resistance

C1, C2, C3, C4 and C5 environments.
ETAG 18-02 – upto and including Type X.
For full details, please consult Nullifire Specification Guidelines.
The construction phase environmental conditions may vary from those during the final building classifications. The construction phase may include higher exposure to the environment than the final classification. Each product and specification should be considered for the resistance during this construction phase including the limitations and caveats. During the drying phase, the intumescent must be protected from all forms of water including rain. In all cases, prolonged water contact must be avoided, including condensation, standing water, heavy running water and fresh concrete run-off (including alkaline moisture). Exposure may lead to detrimental damage to the coating system.

Application Conditions - Additional

Keep all product containers closed when not in use.
Part B is moisture sensitive and should remain tightly closed before use.
Primer may be omitted from the specification in C1 and C2 environments. Damaged primer does not need to be repaired in C1 or C2 environments.
Spraying from too far a distance may result in dry spray or a textured finish that may affect the aesthetic appearance and lead to problems when a topcoat is applied such as coalescence and adhesion.
Refer to application instructions for further guidance.
As a fast-track coating, it is possible to apply single coat thicknesses significantly greater than traditional coatings, upto 10 mm without defect. All 120 minute loadings are possible to apply in a single coat; however, we recomend that the applicator select a target WFT in line with substrate geometry, access and level of finsh required for the project.
Note: If the user needs to stop spraying for longer than 15 minutes flushing will be necessary.
Galvanised bolts, once degreased, can be coated without any further preparation.
No primer required for C1 or C2 environments. The system is not suitable for use over single pack primers and compatibility with 2 pack primers should be checked with the Nullifire team at Tremco.
For use over galvanised surfaces or other substrates please contact the Nullifire team at Tremco.

Substrate Preparation

SC902 should only be used on substrates which have had all mill-scale removed and blasted to an average blast profile of 75 microns, with a minimum of 40 microns, and a cleanliness of Sa 2.5 must be achieved before application of recommended primer.
All surfaces must be clean, dry and free from contamination before coating application.

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Necessary Tools

Airless spray equipment is recommended and should be capable of delivering these guidelines:
Operating Pressure: Min 3100 psi (218 kg/ cm^2)
Tip Size: 19 – 27 thou
Fan Angle: 20° – 50°
Hose Diameter: 10 mm (3/8") (internal diameter)
Hose Length: Max. 30 metres. Inline filters should not normally be required.

Protective Equipment

USE IN WELL VENTILATED CONDITIONS and ensure all recommended protective equipment is worn during handling & use of this product. For full recommendation, refer to safety data sheet.

Mixing

Always mechanically mix product in full pack volumes.
Ensure the two components are thoroughly combined until a uniform colour is obtained by premixing Part A and adding Part B.
SC902 can be thinned up to 2% maximum using Xylene.

Priming

For recommended primers, please consult the Nullifire team at Tremco.
Nullifire has carried out compatibility testing on various primers, but have no control over primer consistency from other manufacturers.
The primer system shall not exceed 150 microns DFT total, with an absolute maximum allowable in overlap areas only of 200 microns DFT.
Primed steel surfaces that are visibly high in gloss must be abraded/sanded to a matt finish.
The primer must be applied in accordance with the manufacturer's instructions.
It is recommended as best practice that a small test patch or area be prepared with the intumescent before commencing the full intumescent coating application to ensure that there are no issues with compatibility, adhesion or drying, etc.

Preparation

Steelwork should be blast cleaned in dry atmospheric conditions using abrasive of suitable type and size, free from fines, moisture and oil. Continue blasting until finish complies with Swedish Standard SIS 05 59 00, preparation grade SA 2.5 or ISO 8501-1.
All surfaces to be coated should be clean, dry and free from loose friable materials and any other contaminants likely to impair adhesion.
Nullifire recommends and has tested a number of primers depending on the application. Refer to the Approved Primer list from the Nullifire team at Tremco. The system is not suitable for use over single pack primers and compatibility with 2 pack primers should be checked with the Nullifire team at Tremco.

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For use over galvanised surfaces or other substrates please contact the Nullifire team at Tremco.

Tool Cleaning

Uncured paint can be removed using xylene. Dried on paint may be removed using a paint scraper. Spray equipment must only be cleaned using xylene, or solvents with minimum 80% xylene, and water or alcohol content must be <0.2%. Higher water contents will lead to gelling in the equipment.

Topcoats

For recommended topcoats, please consult the Nullifire team at Tremco.
Nullifire has carried out compatibility testing on various topcoats, but have no control over topcoat consistency from other manufacturers.
The type, DFT and number of layers of topcoat must be in accordance with the specification. Specifications will be driven by the Nullifire Specification Guidance or the appropriate product ETA.
The topcoat must be applied in accordance with the manufacturer's instructions.
It is recommended as best practice that a small test patch or area be prepared before commencing the full application to ensure that there are no issues with compatibility, adhesion or drying, etc.

Consumption Text

1,750 g/m² @ 1000 µm DFT

Maintenance

Damaged areas should be abraded back to a sound surface. The surface should then be clean and dry before re-applying. Once repaired top seal should be reapplied. Refer to Nullifire System SC900 Application Instructions. Annual inspection and maintenance is required as per AS1851.

Guarantee / Warranty

Tremco CPG Australia Pty Ltd products are manufactured to rigid standards of quality. Any product which has been applied (a) in accordance with Tremco CPG Australia written instructions and (b) in any application recommended by Tremco CPG Australia, but which is proved to be defective, will be replaced free of charge.

Any information provided by Tremco CPG Australia in this document in relation to Tremco CPG Australia's goods or their use is given in good faith and is believed by Tremco CPG Australia to be appropriate and reliable. However, the information is provided as a guide only, as the actual use and application will vary with application conditions which are beyond our control. Tremco CPG Australia makes no representation, guarantee or warranty relating to the accuracy or reliability of the information and assumes no obligation or liability in connection with the information. To the extent permitted by law, all warranties, expressed or implied are excluded.
As per AS2312 Guidelines our standard 10-year warranty is offered on the above systems. If longer or more specific warranty conditions are required, they should be requested prior to the project starts as this may change the specification issued, inspections etc.

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Health And Safety Precautions

USE IN WELL VENTILATED CONDITIONS and ensure all recommended protective equipment is worn during handling & use of this product. For full recommendation, refer to safety data sheet. Safety data sheet must be read and understood before use. Flammable - keep away from open flames and other ignition sources.

Technical Service

Tremco CPG Australia Pty Ltd has a team of Representatives who provide assistance in the selection and specification of products. For more detailed information or service and advice, call Customer Service on 1800 318 038.

Specifications

An appropriate specification must be used for the protection of the full system in accordance with the environmental classification for the environment where the building is located. The environment during construction and transport should also be considered, if necessary, and the worst case used. The Nullifire team at Tremco can assist with selecting an appropriate specification.

Certification

Tremco CPG Australia Pty Ltd
ABN: 25 000 024 064
Unit 12, 4 Southridge Street
Eastern Creek, NSW 2766

P: 1800 318 038
E: tremco@tremco.com.au