

SC804

Intumescent Steel Coating - On-Site, Water Based

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Description

SC804 Intumescent Steel Coating is a very low VOC, borate free, APEO free, water-based, thin film intumescent coating for the protection of structural steelwork and concrete.



Features and Benefits

- Ultra Low VOC.
- Competitive loadings.
- Compatible with a wide range of Carboline primers and Topcoats.
- Easy to apply, with excellent aesthetics.
- Optifire®+ unique traceability identifier.
- Certifire CF5929.
- 3 months without topcoat once fully dried (see Environmental Resistance section)
- Fire protection of concrete - EN13381-3

Usage Purpose

SC804 is optimised to provide 90 minutes fire resistance to 'I' section beams and columns, hollow columns, hollow beams, cellular beams, concrete filled hollow columns, solid steel tension rods and concrete members. Limited 120-minute protection is also available. SC804 can be used on steel, cast iron, galvanised steel and concrete.

Packaging

25 kg drum

Available Colour

White

Traceability & Product Identification

Nullifire is bringing unique identification technologies to the market, offering architects, specifiers, main contractors, and applicators guaranteed traceability of product on-site. Our traceability technologies are not visible to the naked eye, and do not affect performance or product aesthetics.

SC804 features Optifire+, a unique pigment technology, visible only with a specific Nullifire detector ; Optifire+ offers lifetime identification, and remains traceable even after a fire.

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Certificates & Approvals

Certifire CF5929
 BS476 Part 20-22
 Cellular Beams YB5
 EN13381-3 – Concrete Members
 EN13381-6 – Concrete Filled Hollows
 EN13381-10 – Solid Steel Tension Rods
 EAD 350402-00-1106 - Y exposure without topcoat
 (for other certification requirements, contact Nullifire)

Technical Characteristics

Average Drying Times (DFT & Temp)	690 microns DFT @ 20°C	To Touch – 60 minutes To Recoat – 4 hours To Handle – variable depending on conditions 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		1.38 ±0.02 g/cm3
Thickness		DFT: 690 microns - maximum WFT: 1000 microns - maximum Higher thickness's may be possible, however they will impact the drying times. The thickness's above are recommended for optimum film build and drying balance. For required thickness, consult Loading Tables.
Solids Content	Volume Solids	69% ±3
Service Temperature		+5°C to +40°C
Environmental Performance		CEPE LCA & CF
Finish		Matt
Storage		Store in secure, dry warehouse conditions between +5°C and +35°C
Shelf Life		9 months when stored as recommended in original unopened container at 20°C

Environmental Resistance

C1, C2 and C3 environments only. 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.

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Application Conditions - Additional

Nullifire SC804 is recommended for application and use on dry protected structural steel only.

If the steel coating is allowed to get wet, it is likely to be damaged – blistering and wrinkling may occur.

SC804 should only be applied when the air and steel temperatures are above 5°C. Relative humidity should be below 85%.

Steel surface temperature should be a minimum of 3°C above the dew point.

Ensure the substrate is dry and free from contact with rain or condensation during the application and drying of SC804.

Substrate Preparation

SC804 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.

Necessary Tools

Airless spray equipment is recommended and should match these guidelines:

Operating Pressure: 2500 - 3000psi (175 - 210 kg/cm²)

Tip Size: 19 – 21 thou

Fan Angle: 20° – 40°

Hose Diameter: 10 mm (3/8") (internal diameter)

Hose Length: Max. 60 metres, in-line filters should not normally be used.

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

SC804 is supplied ready for use and must not be thinned but should be mechanically stirred prior to use until homogeneous.

Priming

For recommended primers, please consult Nullifire.

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.

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Tool Cleaning

Fresh paint can be removed using water immediately after use. Dried on paint may be removed using a paint scraper. Spray equipment must only be cleaned using water immediately after use.

Topcoats

For recommended topcoats, please consult Nullifire.

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

1,388 g/m² @ 690µm 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, the original specification should be reinstated. Refer to SC800 Series Application Instructions for guidance.

Guarantee / Warranty

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

No liability can be accepted for the information provided in this leaflet although it is published in good faith and believed to be correct.

Tremco CPG UK Limited reserves the right to alter product specifications without prior notice, in line with Company policy of continuous development and improvement.

It is a requirement of the installer to ensure suitability and compatibility of all elements before installation commences and that compliance can be achieved as required.

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.

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Technical Service

Tremco CPG UK Limited 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 Customer Services on 01942 251400.

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. Nullifire can assist with selecting an appropriate specification.