

SELECTION & SPECIFICATION DATA

Generic Type	Nullifire SC902 is a two component, low VOC, high solids, high build, fast cure system, based on patented hybrid technology. SC902 is free from borates and halogens. Due to the unique elastomeric properties of SC902, excellent damage resistance is achieved.
Description	Nullifire SC902 provides a fast curing fire protection coating for structural steel. SC902 is designed to provide up to 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. A faster curing version, suitable for shop application, is available – Nullifire SC901.
Features	<ul style="list-style-type: none"> • Fast cure, even below 0°C, touch dry in 1 hour. • High solids content. • Early weather resistance, shower proof within 1 hour. • Self-priming system tolerant of light rusting to steel, up to 2 weeks post blasting. • 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. • Certifire CF5144. • CE & ETA 20/1216. • Designed for on-site use, but also suitable for off-site use. • Optifire®+ unique traceability identifier.
Color	Part A - White Part B - Translucent Black Mixed - Off-white Cured - Off-white
Finish	Matt
Primer	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. Contact Carboline Technical Service for a complete list of recommended primers.
Recommended Thickness	For required thickness, consult Loading Tables.
Solid(s) Content	85% ± 3% by volume
Theoretical Coverage Rates	3.50kg/m ² based on an applied at 2000 microns dry film thickness (DFT).
VOC Value(s)	137g/l
Topcoats	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. Contact Carboline Technical Service for a complete list of approved topcoats.

Nullifire SC902

PRODUCT DATA SHEET



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Density | Part A: 1.55 ±0.02 g/cm³
Part B: 0.99 ±0.01 g/cm³
Mixed: 1.46 ±0.02 g/cm³

Environmental Resistance | C1, C2, C3, C4 and C5 environments.
EAD 350402-00-1106 – up to 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.
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. Carboline Technical Service can assist with selecting an appropriate specification.

Construction phase: 6 months without topcoat once fully dried.

Pot Life | 60 minutes at 20°C

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. SC902 features Optifire+, a unique pigment technology, visible only with a specific Nullifire detector ; Optifire+ offers lifetime identification, and remains traceable even after a fire.

SUBSTRATES & SURFACE PREPARATION

General | SC902 should only be used on substrates which have had all mill-scale and blasted to an average blast profile of 75 microns, with a minimum of 40 microns, and a cleanliness of Sa2.5 must be achieved before application of a recommended primer. All surfaces must be clean, dry and free from contamination before coating application.

MIXING & THINNING

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.

Thinning | SC902 can be thinned up to 2% maximum using Thinner #10.

Ratio | 100:12 in weight
5.6:1 in volume

APPLICATION EQUIPMENT GUIDELINES

Listed below are general equipment guidelines for the application of this product. Job site conditions may require modifications to these guidelines to achieve the desired results.

Airless Spray	Airless spray equipment is recommended and should match these guidelines: Operating Pressure: min 3100psi (218kg/cm ²)
Spray Tips	0.019" - 0.025"
Fan Size	20 - 40°.
Hose Length	Maximum 30 metres, in-line filters should not normally be used.
Material Hose	10mm (3/8") internal diameter minimum.

APPLICATION PROCEDURES

General	<p>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. As a fast-track coating, it is possible to apply single coat thicknesses significantly greater than traditional coatings, up to 10 mm without defect. All 120 minute loadings are possible to apply in a single coat; however, we recommend that the applicator select a target WFT in line with substrate geometry, access and level of finish 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 Carboline Technical Services. For use over galvanised surfaces or other substrates please contact Carboline Technical Services. Refer to SC900 series Application Instructions for guidance, or consult Carboline Technical Service.</p>
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CURING SCHEDULE

Surface Temp.	Dry to Touch	Dry to Recoat	Dry to Handle
20°C (68°F)	1 Hour	4 Hours	24 Hours

These figures are given as guidance only at 2000 microns DFT. Other factors such as air movement, temperature and coating thickness must be considered.

CLEANUP & SAFETY

Cleanup	Uncured paint can be removed using Thinner #10. Dried on paint may be removed using a paint scraper. Spray equipment must only be cleaned using Thinner #10, 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.
Safety	<p>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.</p> <p>Flammable - keep away from open flames and other ignition sources.</p>

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CLEANUP & SAFETY

Overspray | All adjacent and finished surfaces shall be protected from damage and overspray.

MAINTENANCE

General | Damaged areas should be abraded back to a sound surface. The surface should then be clean and dry before re-applying. The Nullifire repair kit should be used (sold separately) for repairing scratches and chips. Once repaired, Topcoat should be re-applied. Refer to SC900 Series Application Instructions for guidance.

TESTING / CERTIFICATION / LISTING

General | Life Cycle Analysis
Environmental Performance Statement AgBB (SC902 BUCE version only)

EN Standards | BS476 Pt20-22
Certifire CF5144
EN13381-8 – Structural Steel
ETA 20/1216 and CE marked
EN13381-6 – Concrete Filled Hollows
EN13381-9 – Cellular Beams
EN13381-10 – Solid Steel Rods
Australian standards AS4100 and AS1530
(for other certification requirements, contact Carboline Technical Service.>

PACKAGING, HANDLING & STORAGE

Shelf Life | 12 months when stored as recommended and in original unopened container at 20°C.

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

Packaging | Part A: 22.3kg drum
Part B: 2.7kg tin

WARRANTY

To the best of our knowledge the technical data contained herein is true and accurate on the date of publication and is subject to change without prior notice. User must contact Carboline Company to verify correctness before specifying or ordering. No guarantee of accuracy is given or implied. We guarantee our products to conform to Carboline quality control. We assume no responsibility for coverage, performance, injuries or damages resulting from use. Carbolines sole obligation, if any, is to replace or refund the purchase price of the Carboline product(s) proven to be defective, at Carbolines option. Carboline shall not be liable for any loss or damage. NO OTHER WARRANTY OR GUARANTEE OF ANY KIND IS MADE BY CARBOLINE, EXPRESS OR IMPLIED, STATUTORY, BY OPERATION OF LAW, OR OTHERWISE, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. All of the trademarks referenced above are the property of Carboline International Corporation unless otherwise indicated.