

# Intumescent Coatings

Product Catalogue



## Intelligent Engineered Passive Fire Protection

**We are specialists, with one focus that has not and will not change – to protect people and buildings from fire. For over 40 years, Nullifire has been a market leader in intumescent and fire stopping solutions.**

Passive fire protection is highly complex but crucially important, especially as buildings become more sophisticated. At Nullifire, we understand the need to have confidence in fire protection; so, we provide systems that perform when they are called upon.

With a unique team of technical experts, everything is focused on providing what our customers need at every stage of their project – smart protection.

Nullifire is a brand of CPG Europe, a European manufacturer and service provider of high performance building materials.

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## Assistance When Required

**Our targeted approach allows you to access answers to all of your questions - quickly, simply and for every phase of your project.**

Regardless of the complexity of a project, you can turn to the team here at Nullifire. Our trained expert team support architects, specifiers, main contractors and installers in product selection, specification writing and industry best practices. Involving us at the early stages of a project can help you save money and time, as well as the assurance that the products selected are fully compatible and ideal for the job at hand.

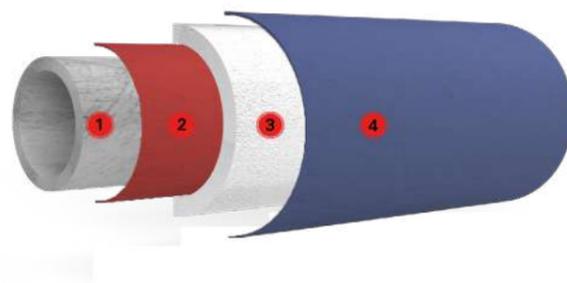
Whilst choosing the right product is vitally important, the application is equally as critical. Our extensive range of training ensures Nullifire products are applied professionally and efficiently, whilst giving installers and contractors access to new technologies and solutions.

All of our product data-sheets, loading tables and additional product information can be downloaded from [www.nullifire.com](http://www.nullifire.com)

## Smartly Designed Solutions

Products engineered for compatibility, the Nullifire intumescent coatings range is designed to provide a complete system for fire protection and decoration of structural steel.

Minimising the risk of problems occurring on site, we can assure you that when using a complete Nullifire solution, you will achieve the desired look, feel and protection for the project.



1. Steel Section
2. Compatible Nullifire Primer
3. Compatible Nullifire Basecoat
4. Compatible Nullifire Top Seal

### 1. Steel Section

Our range of intumescent base coats, top seals and primers can be used on a mixture of steel sections and are suitable for areas up to C5. For more specific enquiries, please refer to the technical data sheets, loading tables and/or a member of the technical team.

### 2. Primer

Inhibits corrosion of the underlying structural steel. Primers also provide a key for the intumescent basecoat. If using, SC901 or SC902, primers may not be required (contact our technical services department for more information, prior to use)

### 3. Intumescent Basecoat

The intumescent coating is applied to the correct thickness to provide the specified level.

### 4. Top Seal

Smooth hard wearing finish to seal the basecoat, which protects from weather. The decorative aspect of the top seal provides an aesthetically attractive appearance.

It is recommended that Nullifire Primers, Base coats and Top Seals are applied by experienced specialists. Full details of our recognised contractors can be obtained by contacting us, or visiting [www.nullifire.com](http://www.nullifire.com)

## The Faster Way to The Smarter Solution

Quickly identify the right product for the project.

This selector provides an at-a-glance overview of the complete Nullifire steel protection range. Before referring to more detailed information about each product, use the selector to:

- Review and compare products and their specific functions
- Find suitable products for specific applications
- Always check the product application or technical data sheet for specific guidance and instructions.

Exposure Scenario		Water Based Intumescent				Solvent Based Intumescent		Hybrid Intumescent	
ISO 12944	ETAG	SC801	SC802	SC803	SC804	SC601	SC602	SC901	SC902
C1	Z2	✓	✓	✓	✓	✓	✓	✓	✓
C2	Z1/Y	✓	✓	✓	✓	✓	✓	✓	✓
C3	Y/X	✓	✓	✓	✓	✓	✓	✓	✓
C4	X	X	X	X	X	✓	✓	✓	✓
C5	n/a	X	X	X	X	X	X	✓	✓
6 month (Maximum semi-exposed)		Topcoat required	Topcoat required	Topcoat required	No Topcoat required (3 months Maximum)	No Topcoat required	No Topcoat required	No Topcoat required	No Topcoat required



## Smartly Designed Solutions

Nullifire products listed are suitable for areas up to C5. For project specific enquiries, please contact us for technical advice. Remember that many projects could have a mixture of classification environments, which have to be considered independently.

### C1: Very Low Corrosion Risk

**Interior:**  
Heated buildings with clean atmospheres (e.g. offices, shops, schools and hotels)

**Exteriors:**  
n/a

### C2: Low Corrosion Risk

**Interior:**  
Unheated buildings where condensation may occur (e.g. depots, sports halls etc)

**Exteriors:**  
Atmosphere's with low level of pollution. Mostly rural areas.

### C3: Medium Corrosion Risk

**Interior:**  
Production rooms with high humidity and some air pollution (e.g. food processing plants, laundries, breweries etc.)

**Exteriors:**  
Urban and industrial atmospheres, moderate sulphur dioxide pollution, coastal areas with low salinity.

### C4: High Corrosion Risk

**Interior:**  
Chemical plants, swimming pools coastal ships and boatyards.

**Exteriors:**  
Industrial areas and coastal areas with moderate salinity.

### C5: Very High Corrosion Risk

**Interior:**  
Buildings or areas with almost permanent condensation and with high pollution.

**Exteriors:**  
Industrial areas with high humidity and aggressive atmosphere.



## One-Coat Protection

SC900 series are innovative patented intumescent coatings delivering ground breaking performance for the protection of internal, semi-exposed, and external steelwork. Suitable for both on-site and off-site work.

Exposure Scenario		Hybrid Intumescent	
ISO 12944	ETAG	SC901	SC902
C1	Z2	✓	✓
C2	Z1/Y	✓	✓
C3	Y/X	✓	✓
C4	X	✓	✓
C5	n/a	✓	✓
6 month (Maximum semi-exposed)		No Topcoat required	No Topcoat required

### **SC901** Fast Track Intumescent Coating

#### Product Overview

SC901 is a low VOC, one-coat, high build system, based on patented technology. Designed to provide up to 120 minutes fire resistance to “I” sections beams, columns, hollow columns and cellular beams.

#### Advantages at a glance:

- Fire rating up to 120 minutes tested to BS476 and EN13381: Part 8
- Fast cure: touch-dry in 1 hour, handle and transport within 1 day
- Early weather resistance, shower proof within one hour
- Self-priming system tolerant of light rusting to steel, up to 2 weeks post blasting
- High-build potential with all rating possible in one application.

#### Properties (typical values)

Specific gravity	Part A: 1.55 ±0.02, Part B: 0.99 ±0.01, Mixed: 1.46 ±0.02
Volume solids	85% ±3%
VOC	137 g/l
Viscosity	Part A: 140 ±20 Poise (Spindle 7 @ 50 rpm) Part B: 10 ±1 Poise (Spindle 7 @ 50 rpm) Mixed: 80 ±10 Poise (Spindle 7 @ 50 rpm)
Mix ratio	By weight 100:12, by volume 5.6:1
Pot life or sprayable life	15 minutes
Theoretical coverage	1,750 g/m <sup>2</sup> based on applied 1.00 mm dry film thickness
Storage	Store in secure, dry warehouse conditions between +5°C and +35°C
Shelf life	12 months when stored as recommended in original unopened container

### **SC902** Fast Track Intumescent Coating

#### Product Overview

SC902 is a fast-track, on-site, low VOC, one-coat, high-build system, based on patented technology. Designed to provide up to 120 minutes fire resistance to “I” section beams, columns, hollow columns and cellular beams.

#### Advantages at a glance:

- Fire rating up to 120 minutes tested to BS476 and EN13381: Part B
- Fast cure: early weather resistance, shower proof within 1 hour.
- Achieves external durability with an approved top seal
- Cures below 0°C and fully dry by the following day
- Self-priming system, up to 2 weeks post blasting
- High-build potential with all rating possible in one application.

#### Properties (typical values)

Specific gravity	Part A: 1.55 ±0.02, Part B: 0.99 ±0.01, Mixed: 1.46 ±0.02
Volume solids	85% ±3%
VOC	137 g/l
Viscosity	Part A: 140 ±20 Poise (Spindle 7 @ 50 rpm) Part B: 10 ±1 Poise (Spindle 7 @ 50 rpm) Mixed: 80 ±10 Poise (Spindle 7 @ 50 rpm)
Mix ratio	By weight 100:12, by volume 5.6:1
Pot life	Minimum 60 minutes
Theoretical coverage	1,750 g/m <sup>2</sup> based on applied 1.00 mm dry film thickness
Storage	Store in secure, dry warehouse conditions between +5°C and +35°C
Shelf life	12 months when stored as recommended in original unopened container.



## Economical & Versatile

Nullifire water-based solutions offer safe, fast and economical fire protection for internal steelwork. Nullifire pioneered water-based technology and offer a fully comprehensive range.

Exposure Scenario		Water Based Intumescent			
ISO 12944	ETAG	SC801	SC802	SC803	SC804
C1	Z2	✓	✓	✓	✓
C2	Z1/Y	✓	✓	✓	✓
C3	Y/X	✓	✓	✓	✓
C4	X	X	X	X	X
C5	n/a	X	X	X	X
6 month (Maximum semi-exposed)		Topcoat required	Topcoat required	Topcoat required	No Topcoat required (3 months Maximum)

### SC801 Intumescent Basecoat

#### Product Overview

SC801 Intumescent Basecoat is a water-based, white, thin film, intumescent coating for the protection of internal structural steelwork. Optimised to provide up to 120 minutes fire resistance to "I" section beams, columns, hollow tube columns and cellular beams.

#### Advantages at a glance:

- Water-based intumescent coating suitable for internal use on structural steelwork for up to 120 minute fire resistance.
- Easier to apply product for greater efficiency on site with improved smooth matt finish.
- Compatible with a full range of Nullifire primers and top seals
- Low odour and very low VOC

#### Properties (typical values)

Specific gravity	1.38 ± 0.02
Volume solids	68% ± 3%
VOC	1 g/l
Viscosity	150-200 Poise (Spindle 6 @ 20 rpm)
Theoretical coverage	2,050 g/m <sup>2</sup> based on applied 1.00 mm dry film thickness
Storage	Store in secure, dry warehouse conditions between +5°C and +35°C
Shelf life	6 months when stored as recommended in original unopened container

### SC802 Intumescent Basecoat

#### Product Overview

SC802 is a water-based, single pack product. SC802 offers the optimum mix of economic, environmental, aesthetic and practical benefits. Optimised to provide 60 minutes fire resistance to "I" section beams, columns, hollow columns, beams and circular beams.

#### Advantages at a glance:

- Most competitive "all-round" 60 minute water-based product
- Easy to spray product to reduce downtime and potential difficulties on site
- Gives an outstanding smooth, matt finish
- Outstanding adhesion and durability
- Water-based technology

#### Properties (typical values)

Specific gravity	1.38 ± 0.02
Volume solids	70% ± 2%
VOC	6 g/l
Viscosity	150-200 Poise (Spindle 6 @ 20 rpm)
Theoretical coverage	1,000 g/m <sup>2</sup> based on applied 0.5 mm dry film thickness
Storage	Store in secure, dry warehouse conditions between +5°C and +35°C
Shelf life	6 months when stored as recommended in original unopened container

### SC803 Intumescent Basecoat

#### Product Overview

SC803 Intumescent Basecoat is a water-based, white, thin film intumescent coating for the protection of internal structural steelwork. Optimised to provide 60 minutes fire resistance to "I" section beams, columns, hollow columns and hollow beams. Limited 90 minute protection is also available.

#### Advantages at a glance:

- Ultra low VOC
- Market leading loadings
- Compatible with a wide range of primers and topcoats
- Easy to apply

#### Properties (typical values)

Specific gravity	1.38 ± 0.02
Volume solids	69% ± 3%
VOC	0.5 g/l
Theoretical coverage	1,000 g/m <sup>2</sup> based on applied 0.5 mm dry film thickness
Storage	Store in secure, dry warehouse conditions between +5°C and +35°C
Shelf life	6 months when stored as recommended in original unopened container

### SC804 Intumescent Basecoat

#### Product Overview

SC804 is a water-based, white, thin film intumescent coating for the protection of internal structural steelwork. It was developed to give optimised loadings for 90 minutes, and up to 120 minutes fire resistance.

#### Advantages at a glance:

- Ultra Low VOC
- Competitive Loadings
- Compatible with a wide range of primers and topcoats
- Excellent aesthetics

#### Properties (typical values)

Specific gravity	1.38 ± 0.02
Volume solids	69% ± 3%
VOC	0.5 g/l
Theoretical coverage	1,000 g/m <sup>2</sup> based on applied 0.5 mm dry film thickness
Storage	Store in secure, dry warehouse conditions between +5°C and +35°C
Shelf life	6 months when stored as recommended in original unopened container



## Proven Protection

Nullifire solvent-based products offer fast applied robust fire protection for structural steelwork. These products also offer a more robust environmental tolerance and resistance as well as a decorative finish, and are suitable for on-site or off-site application.

Exposure Scenario		Solvent Based Intumescent	
ISO 12944	ETAG	SC601	SC602
C1	Z2	✓	✓
C2	Z1/Y	✓	✓
C3	Y/X	✓	✓
C4	X	✓	✓
C5	n/a	X	X
6 month (maximum semi-exposed)		No Topcoat required	No Topcoat required

### **SC601** Intumescent Basecoat

#### Product Overview

SC601 is a single pack acrylic thin film intumescent basecoat for the protection of internal and semi-exposed structural steelwork. SC601 is optimised to provide 60 minutes fire resistance to "I" section beams & columns, hollow beams & columns, as well as cellular beams. SC601 also provides 90 minute fire resistance and limited 120 minute protection.

#### Advantages at a glance:

- Competitive loadings
- Compatible with various primers and topcoats
- Easy to apply by airless spray, optimised to provide fire protection for 60 minutes as well as limited range of sections for longer protection times
- Suitable for off-site application

#### Properties (typical values)

Specific gravity	1.36 ± 0.02
Volume solids	72% ± 2%
VOC	317 g/l
Consumption	670 g/m <sup>2</sup> @ 0.6mm DFT
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

### **SC602** Intumescent Basecoat

#### Product Overview

SC602 is a single pack acrylic thin film intumescent basecoat for the protection of internal and semi-exposed structural steelwork. SC602 is optimised to provide 60 minutes fire resistance to "I" section beams & columns, hollow beams & columns, as well as cellular beams. SC602 also provides 90 minutes fire resistance and limited 120 minute protection.

#### Advantages at a glance:

- Competitive loadings
- Compatible with various primers and topcoats
- Easy to apply by airless spray, optimised to provide fire protection for 60 minutes as well as a limited range of sections for longer protection times
- Suitable for on-site application

#### Properties (typical values)

Specific gravity	1.36 ± 0.02
Volume solids	72% ± 2%
VOC	317 g/l
Consumption	670 g/m <sup>2</sup> @ 0.55 DFT
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



## Anti-Corrosion Primers

Nullfire primers are designed to protect the surface of structural steel from corrosive attack. They also provide a suitable key onto which a Nullfire intumescent basecoat can be applied.

Each Nullfire primer has been formulated to meet specific application conditions and to be compatible with the Nullfire range of intumescent base coats. It is important to use products that have been tested together for compatibility, this ensures that costly adhesion problems are avoided; allowing the fire protection process to run smoothly. Compatibility also guards against de-lamination of the coatings once installed which can be extremely costly to rectify once construction has finished and the building is in use.

Nullfire has tested all of its products with the range to avoid these issues, providing a high performance integrated system for all requirements from a single source.

### PM015

#### Two-Pack Aluminium Epoxy Primer

##### For Problem Areas and Substrates

PM015 provides an unequalled level of barrier protection and corrosion resistance on various steel types.

##### Advantages at a glance:

- Protects black steel, galvanised steel, and rusted steel
- Compatible with all Nullfire base coats (except 900 series)
- Self priming
- Corrosion protection with a single coat
- Aluminium finish

Properties (typical values)	
Substrate	Black steel, galvanised steel, rusted steel
Colours available	Aluminum
Finish	Semi-gloss
Preparation	Contact us for information on the preparation of difficult substrates
WFT	87-115 µm
DFT	75-100 µm
Drying times: @20°C touch dry	6 hours
Drying times: @20°C full cure	3 days
Over coating: @20°C	6 hours*
Theoretical coverage	11.5 m <sup>2</sup> /l at 50 µm
Thinners	FC002
Cleaners	FC002

### PM020

#### Single-Pack Alkyd High Build

##### Standard Primer for General Work

A single pack solution that is well suited to production shops or sites that need fast-cure drying and handling times.

##### Advantages at a glance:

- Single pack
- Compatible with all Nullfire base coats (except 900 series)
- Fast drying primer
- Good filling properties on rough or pitted steel
- Traditional red colour
- Easily sprayed with both airless and conventional equipment

Properties (typical values)	
Substrate	Black steel
Colours available	Red
Finish	Matt
Preparation	Grit blast steel to SA2 1/2 or equivalent
WFT	68-98 µm
DFT	35-50 µm
Drying times: @20°C touch dry	20 minutes
Drying times: @20°C full cure	3 days
Over coating: @20°C	8 hours minimum
Theoretical coverage	11.0 m <sup>2</sup> /l at 50 µm
Thinners	FC010
Cleaners	FC002 or FC010

\*Maximum over coating time depends on basecoat. Please contact Nullfire technical team for more information

## Decorative Top Seals

Nullfire top seals provide an outstanding quality decorative finish. This is particularly useful where steelwork remains exposed as opposed to being hidden by false ceiling installations or by boarding around columns.

Some top seals are available in a range of shades and colours. Top seals also provide a durable finish that can be easily maintained. All Nullfire top seals have been tested with Nullfire base coats to ensure compatibility and performance.

### TS134

#### Two-Pack Acrylic Polyurethane Top Seal

##### High Performance Top Seal

- High-gloss, solid finish
- Available in a range of RAL colours
- Suitable for on-site or off-site application
- Excellent abrasion resistance
- Excellent resistance to weathering
- Easily sprayed with both airless and conventional equipment
- VOC-compliant to current AIM regulations

##### Approved for use with

Base coat SC901, SC902, SC801, SC802, SC804, SC601, SC602

### TS815

#### Single-Pack Modified Acrylic Top Seal

##### General Purpose Top Seal for C1 & C2 Environments

- Single-pack product
- Gloss finish
- Available in standard white and a limited range of RAL colours
- Suitable for on-site or off-site application
- Fast drying
- Easily sprayed with both airless and conventional equipment
- VOC compliant to current AIM regulations

##### Approved for use with

Base coat SC601, SC602, SC801, SC802, SC804

### TS816

#### Single-Pack Water-Based Acrylic Top Seal

##### Interior Top Seal

- Attractive soft sheen washable finish
- Easy application and excellent coverage
- Environmentally friendly with low odour
- Available in a limited range of RAL colours
- Good abrasion resistance

##### Approved for use with

Base coat SC801, SC802, SC804



Product Compatibility Table						
	Base coats	PM015	PM020	TS134	TS815	TS816
<b>Thinner</b>	Refer to TDS	FC002	FC010	FC025 Spray - FC215 roller	FC150	Clean Water
<b>Cleaner</b>	Refer to TDS	FC002	FC010 Or FC002	FC002	FC150	Clean Water

## Carboguard 633

A Two-Component Phenalkamine Epoxy

### Universal Primer

Heavy duty, high build primer or intermediate coating. Low temperature curing and fast overcoat-able, can be used on galvanised steel.

- Excellent anti-corrosive properties
- Applicable as one-coat system up to corrosion class C4 (ISO 12944-2)
- Compatible with all Nullifire base coats

## Carbothane I34 HP

Aliphatic Acrylic Polyurethane

### High Gloss & High Solid Polyurethane Top Coat

Thin film, high gloss finish with exceptional weathering performance characteristics. Used extensively in virtually all industrial markets, it provides a smooth, durable finish that has superior resistance to corrosion, abrasion and chemical exposure.

- High solids, low VOC content
- Excellent weather-ability

Approved for use with

Base coat SC601, SC602, SC801, SC802, SC804, SC901, SC902

## Carbothane I56 SG

Single-Pack Modified Acrylic Top Seal

### Universal Primer

- Suitable for application over a number of epoxy primer, and can be applied directly on galvanizes steel. Provides good weathering performance with a surface that is easy to keep clean.
- Outstanding performance properties in both mild and aggressive environments
- Perfect where non-chalking finish is required

Approved for use with

Base coat SC601, SC602, SC801, SC802, SC804, SC91, SC902

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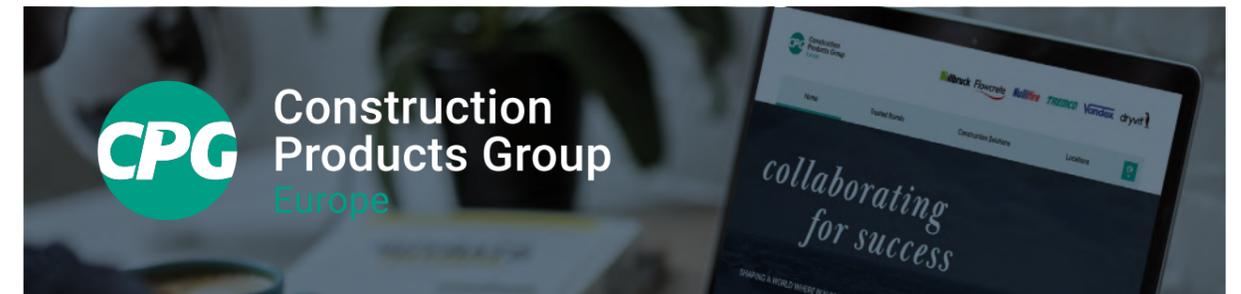


# Certification and Accreditation

**Nullifiers passive fire protection solutions have been fully tested to the latest British and European standards, providing the highest levels of certification. Installing Nullifire products will provide a system that is not only fit for purpose today, but will meet changing legislation in the future.**



CPG UK products are manufactured to rigid standards of quality. Any product which has been applied (a) in accordance with CPG UK written instructions and (b) in any application recommended by CPG UK, 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. CPG UK Limited reserves the right to alter product specifications without prior notice, in line with Company policy of continuous development and improvement.



CPG Europe manufactures high performance building materials in order to solve the complex challenges faced by today's construction industry. With over 1,400 employees across Europe, we are committed to shaping a world where buildings and structures save energy, last longer and exceed sustainability benchmarks.

## Delivering World-Class Construction Product Solutions.

The product brands housed within CPG Europe cover a wide array of different construction needs and provide a wealth of complex services, support and systems that are rarely found together under one roof.



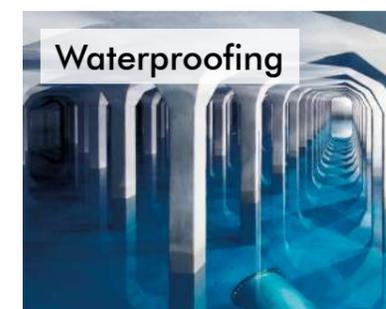
**Sealing, bonding & insulation**  
Window Insulation, Façade Construction, Exterior Insulation & EIFS, Structural & Inplant Glazing



**Passive fire protection**  
Intumescent Coatings, Fire Stopping



**Flooring**  
Seamless Resin Flooring, Subfloor Preparation, Car Parking Structures



**Waterproofing**  
Civil Engineering, Potable & Waste Water Industry, Balconies, Terraces, Basements & Foundations



**Roofing**  
Liquid Applied Systems, Felt Systems, Vegetated Roofing

Europe's leading construction products brands...





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