

## FIRE RESISTANT AQUASTEEL 1001



### A THIN-FILM WATERBORNE INTUMESCENT COATING DESIGNED TO PROVIDE 30 AND 60 MINUTES FIRE RESISTANCE ON STRUCTURAL STEEL MEMBERS IN INTERNAL ENVIRONMENTS

- Waterborne intumescent coating for internal use
- Suitable for use on all standard steel sizes and profiles
- Dries to a matt white finish
- Simple specification
- Can be applied by brush, roller or airless spray
- Zeroflame Topcoat W is available if a decorative finish is required

#### Description

Zeroflame AquaSteel 1001 is a thin-film waterborne intumescent coating designed to provide 30 and 60 minutes fire resistance on structural steel members in internal environments.

#### Use

Zeroflame AquaSteel 1001 is used to achieve 30 and 60 minutes fire resistance on structural steel in accordance with EN 13381-8:2013.

#### Appearance & Overcoating

Zeroflame AquaSteel 1001 achieves a matt white finish. If an alternative colour or gloss level is required, Zeroflame Topcoat W is available.

#### Coverage & Application Rates

See separate loading table. For a more detailed specification please contact Zeroflame directly or use the online calculator at [www.zeroflame.co](http://www.zeroflame.co)

#### Number Of Coats

Variable depending on the specification required and the application method.

#### Surface Preparation

Steelwork to be coated with Zeroflame AquaSteel 1001 must be primed with an anti-corrosion primer suited to the intended environment and applied to the manufacturer's specification with the exception that that thermoplastic, bitumen and chlorinated rubber coatings are not used. The dry film thickness should not exceed the following limits: alkyd primer  $\leq 90$  microns, epoxy primer  $\leq 162$  microns, acrylic primer  $\leq 65$  microns. Before applying Zeroflame AquaSteel 1001 patch prime any damaged areas and ensure that the surface is dry, free from rust, oil, grease, dust and other contaminants. Existing decorative finishes must be removed. If the steel has been galvanised or coated with a zinc-rich primer a suitable tie-coat must be applied.

#### Method Of Application

Zeroflame AquaSteel 1001 can be applied by brush, roller or airless spray, the following equipment being recommended:

Brushing: 75mm synthetic filament brush

Rolling: 100mm, medium nap roller

Spraying: Airless system operating at 2,200 – 3,000 psi, tip size 14 – 21 thou with fan angle to suit the section of steel being coated and up to 30m of 3/8" material and 3m of 1/4" whip line.

Spray application achieves the best finish, whilst brush or roller application will result in a textured finish.

#### Drying Time

Re-coat: 8 hours

Top coating: 48 hours

At 23°C and 50% RH

#### Thinning & Cleaning

Zeroflame AquaSteel 1001 should be applied directly from the container after thorough stirring and should not be thinned. Clean all equipment with

water immediately after use.

#### Application Conditions

Surface/ambient temperature:  $> 5^{\circ}\text{C}$

Relative humidity:  $< 85\%$

#### Restrictions To Use

For internal use only.

#### Technical Data

Flashpoint: Non-combustible

Specific gravity: 1.4

Volume solids: 68%

#### Finish

Matt white.

#### Storage Instructions

Storage: 12 months frost free in unopened containers.

#### Limits Of Exposure

Recommended for application to dry, protected, interior structural steel only. If Zeroflame AquaSteel 1001 is allowed to get wet it is likely to become damaged, and may cause blistering and wrinkling to occur.

#### VOC

EU Limit Value for this product (Cat 11 A/i): 140g/l (2007), 140g/l (2010). This product contains a maximum of 45g/l VOC.

#### Steel Loading Specification

Structural Steel	EN 13381-8:2013	
	I/H Section	Hollow Section
No. of sides	30 minutes	
	kg/m <sup>2</sup> at design temp. 550°C	
	3 sides	0.55 1.24
4 sides	0.55	1.35
No. of sides	60 minutes	
	kg/m <sup>2</sup> at design temp. 550°C	
	3 sides	1.33 2.20
4 sides	2.00	2.20

Section Type	No. of sides	Fire resistance	Hp/A
I/H beam/ columns	3 sides	30 & 60 minutes	300 m <sup>-1</sup>
	4 sides	30 & 60 minutes	300 m <sup>-1</sup>
Hollow section	3 sides	30 minutes	300 m <sup>-1</sup>
	3 sides	60 minutes	140 m <sup>-1</sup>
	4 sides	30 minutes	300 m <sup>-1</sup>
	4 sides	60 minutes	130 m <sup>-1</sup>

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