

## PROTEGAFIRE S168

### DESCRIPTION

A water borne intumescent coating for the fire protection of interior structural steelwork.

### PRODUCT FEATURES AND RECOMMENDED USES

- ◆ Provides 30, 60 and 90 minutes fire resistance to structural steelwork.
- ◆ Tested in accordance with BS 476:Part 21:1987 by Warrington Fire Research and Building Research Establishment.
- ◆ Highly competitive loadings for most steel section sizes, giving reduced application costs.
- ◆ Easy application properties.
- ◆ Minimal VOC's – EPA Compliant and 'environmentally friendly'.
- ◆ Topseals are available in a very wide colour range (topseal is not required in a C1 interior environment).
- ◆ Recommended for on-site application. Off-site applications must be topcoated before being taken outside and carefully handled (see Application Notes).
- ◆ Recommended for interior environments classified as C1 or C2 under the definitions in ISO 12944-2:1998.

### TECHNICAL DATA

**Volume solids** 70 ± 2% (ISO 3233).

**Specific gravity** 1.33 – 1.37.

**Product code** 4192 001

### Recommended film thicknesses and theoretical coverage

| Recommended film thicknesses |         | Theoretical coverage   |
|------------------------------|---------|------------------------|
| dry                          | wet     |                        |
| 200 µm                       | 285 µm  | 3.5 m <sup>2</sup> /l  |
| 1600 µm                      | 2285 µm | 0.43 m <sup>2</sup> /l |

Practical coverage depends on the application method, painting conditions and the shape and roughness of the surface to be coated.

### Drying time

| DFT 375 µm and RH 70% |     | + 10 °C           | + 20 °C | + 25 °C |
|-----------------------|-----|-------------------|---------|---------|
| Dust Free             |     | 4 h               | 1 h     | 45 mins |
| Hard Dry              |     | 18 h              | 4 h     | 1 h     |
| Overcoating           | min | 18 h              | 4 h     | 1 h     |
|                       | max | See Product Notes |         |         |

Drying and recoating times are related to the film thickness, temperature, the relative humidity of the air and ventilation.

**Finish** Matt.

**Colours** Off white.

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## APPLICATION DETAILS

### Surface preparation

**Steel:** Degrease steel where necessary to SSPC-SP1 solvent cleaning to remove weld flux and general contamination prior to blasting. All sharp edges should be ground and weld spatter removed. Blast clean to Swedish Standard SIS 05 5900 Sa 2½ or British Standard 7079 equivalent. Maximum profile 75 microns. Apply anticorrosive primer to suitable dft – consult Protega Coatings for advice. Suitable primers compatible with ProtegaFire S168 include:

ProtegaPrime MPH700 and MPH800 series  
ProtegaShield EPY300/301, EMP600/601 and SPF series  
ProtegaBond ST200 and WG200  
ProtegaBlast ZR992 (refer to ASFP TGN006:1998 – ensure removal of salts).  
Consult relevant primer Product Data Sheet for details.

**Galvanising:** Degrease and apply ProtegaClad Bonding Coat to 15-20 microns dft. Surfaces should be clean, dry and free from all grease, oil and general contamination.

### Application conditions

Only apply in conditions of good ventilation which should be maintained during drying. Do not apply when rain, mist, sleet or snow are imminent. Do not apply or allow to dry below 5°C, temperatures above 10°C are preferred. During application and drying time of the paint coating, the surface should be dry, the Relative Humidity should not exceed 85%, and as with all water borne coatings the RH should be maintained as low as possible. The substrate temperature should remain at least 3°C above the dew point.

### Mixing

Mix well before use.

### Application

| Method                | Airless Spray   | Automatic Spray | Conventional Spray | Brush | Roller |
|-----------------------|-----------------|-----------------|--------------------|-------|--------|
| Output Fluid Pressure | Min 3000 p.s.i. | No              | No                 | Yes   | Yes    |
| Tip Size              | 21 – 25 thou    |                 |                    |       |        |

Brush/roller application will typically give up to 500 microns dft for multi-coat application, but up to 1mm can be achieved with poorer cosmetic finish. Highest standard of decorative finish is only likely to be achieved with careful airless spray application. Airless spray application will give up to a maximum of 1600 microns dft in a single coat dependant on configuration. Avoid exceeding maximum stated film thicknesses.

Off-site applications must be allowed sufficient hardening time before moving. Coated sections should be packed and handled so as to minimise damage to coating and prevent ponding by water, and should be stored and transported under cover. If possible, handling cleats should be attached to the steelwork to minimise lifting damage. Topseal must be applied before leaving the shop. On site, all damage should be repaired to original specification – consult Protega Coatings for advice.

Approved topseals for ProtegaFire S168 include:

ProtegaPrime MPH700 (alkyd primer/finish)  
ProtegaLac C12 (modified alkyd primer/finish)  
ProtegaThane PLS(HS) (2 pack polyurethane - brush or spray)  
ProtegaLac ABV90 Finish (modified alkyd – spray or brush, high build)  
ProtegaLac ACV90 Finish (modified alkyd – spray, very quick drying)

### Thinner

Clean potable water, but see Product Notes.

### Cleaning of equipment

Remove remaining paint from equipment, flush thoroughly with clean water, then with 902 Thinners, until solution appears uncontaminated, to avoid corrosion problems.

### FLASH POINT

Above 55°C

### STORAGE

Store in dry, cool conditions and protect from frost.

### VOC

Volatile Organic Compound content: 15 ± 10 gm/ltr.

### HEALTH AND SAFETY

Containers are provided with safety labels, which should be observed. Further information about hazardous influences and protection are detailed in individual health and safety data sheets. A health and safety data sheet is available on request from Protega Coatings Ltd.

### PRODUCT NOTES

Thinning of this product is not recommended. If necessary, measure the water addition carefully and make an appropriate increase in the wet film thickness to ensure the required dry film thickness is achieved.

**Overcoating:** only overcoat with self or approved topseal – consult Protega Coatings for advice. Maximum overcoating time is indefinite, providing the surface is clean and the coating is sound. Coated surfaces must be kept in controlled, dry conditions until topsealed or degradation may occur.

Overcoating at 750 microns dft and RH 70%:

Dust-free: 8 h (at 10°C), 2 h (at 20°C), 1.5 h (at 25°C)  
Min overcoating: 24 h (at 10°C), 12 h (at 20°C), 8 h (at 25°C)

This information is given in good faith for the guidance of users but without warranty or liability. Any queries should be referred to our Technical Department. The above information, based on laboratory tests and practical experience, has been proved valid at the date marked on the product data sheet. When necessary verify the validity of the product data sheet. The quality of the product is ensured by our operational system, based on the requirements of the standards ISO 9001. As a manufacturer we cannot be responsible for any damages caused by using the product against our instructions or for inappropriate purposes. For professional use only.