

Passive Fire Protection



ST100 Water Based Intumescent Steel Coating

The new Pyroplast ST100 is a waterborne intumescent coating for fire protection of internal structural steelwork (columns, beams, framework) designed to protect life & assets.



Offers F30 to F90 fire protection provisions with a single system.



STANDARD FEATURES

- Small layer thicknesses (applies to F30-F90)
- Only 3-4 operations for coating F90 = lower costs for application
- Water based system enables parallel work and less protection measures
- Significant cost advantages for handling, transport and storage
- Primer and top coats also available

THE INTUMESCENT ADVANTAGE

- Lightweight, small layer thicknesses
- Easy and Fast application
- Does not affect other trades on site
- Dust free, smooth finish is ideal for visible sections – intumescent paints keep the original structure & appearance
- Easy to maintain
- Can be applied offsite and transported to site
- Technical support and training

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ABOUT RUETGERS ORGANICS

- Strong history – since 1877
- Owned by International Chemical Investors GmbH, Germany
- Over 25 years experience in the manufacture of fire protection systems
- Ruetgers product range:
 - Wood preservation systems
 - Fire protection systems:
 - Wood
 - Structural steel
 - Textiles

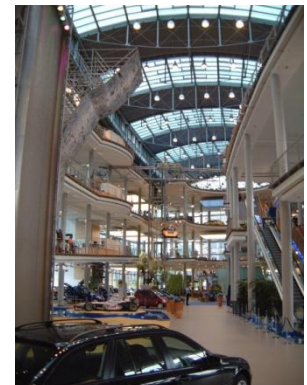


HOW INTUMESCENTS WORK

- Intumescent coatings swell to form a layer of char foam in case of fire or heat (250-300°C)
- The foam layer protects the substrate from heat transfer for a period of time (eg. 30, 60, 90 or 120 minutes)
- Package usually consists of anti-corrosive primer, intumescent paint and top coat

DETERMINING THE FIRE RATING

- Australia has a performance based system which means that the fire risk needs to be calculated for each of the structures
- This risk determines the fire rating
- Example: a warehouse may only require a 30 minute fire rating whilst a hospital may require 120 minute fire rating
- There can be different ratings in different areas of the building
- The building designer determines the fire risk of the structure



Solutions for the Mining, Minerals Processing
& Infrastructure Industries

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ST100 Technical Information

Fields of Application	For the protection of internal and semi-exposed structural steel (I-sections and hollow sections). Not suitable for fully exposed structural steelwork or exposure to highly aggressive gas.
Standards	AS1530.4 / DIN4102 / BS476
Pack Size	25kg buckets
Colour & Finish	Off-white with a rough surface and texture depending on the application process
Surface Preparation	<p>Untreated Surfaces Steel or iron surfaces should be degreased and blast cleaned to preparation grade SA 2 ½ according to ISO 8501/ 1+2. If only hand cleaning is possible then degrease surface, wire brush to grade ST3 according to ISO 8501/1+2 and apply a suitable approved anti-rust primer with recommended dry film thickness.</p> <p>Primed Surfaces Remove poorly adhering coats, check good-adhering coats for compatibility. If necessary run down slightly, remove dust and touch up with a suitable primer.</p> <p>Galvanised surfaces Remove dust and grease and apply a suitable primer</p>
Application Method	Brushing, rolling, airless spraying
Application Quantities	Loadings for the different applications and for different countries are available and depend on local approvals.
Application Guidelines	Stir well before use. Do not dilute. Do not apply at temperatures below +5°C (product, surface and air) and a relative air humidity over 80%. Brushing: Apply at least 2 coats to obtain an even film thickness. Airless spraying: If necessary dilute with up to 5% water.

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ST100 Technical Information cont.

Cleaning Tools	Rinse with water immediately after use to avoid drying out.
Drying Time	At 20°C, 60% relative air humidity and an application rate of 1000g/m ² : <ul style="list-style-type: none"> • Dry to touch after approximately 4 hours • Can be recoated after approximately 24 hours
Application of Topcoat	Application of a topcoat can protect the intumescent coat against effects of atmospheric humidity and other environmental influences. If a topcoat is not applied, surfaces treated with pyroplast® ST100 should not be exposed to high humidity or rain.
Density	Approximately 1.27 g/cm ³ at 20°C
Flash Point	Not inflammable
Regulation on Hazardous material	The product is not hazardous according to 91/155/EWG
VOC	Max. limit value of product according to EU (cat. 1.1i/WB): 140g/l (2007)/140g/l (2010). This product contains max. 75g/l VOC.
Precautions	Always observe usual precautions when working with paints
Storage / Transport	Protected from frost and humidity pyroplast® ST100 can be stored for at least 36 months in sealed containers.
Environmental Protection	Do not allow pyroplast® ST100 to seep into the soil, water or drainage channels.
<p>This technical leaflet has been compiled to the best of our knowledge and experience. In view of the large number of applications, we are unable to give a guarantee for every case.</p>	



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