

PHX 170-120 SOLVENT-BORNE

INTUMESCENT FIRE RESISTANT COATING

DESCRIPTION:

ZONE Phoenix 170-120 Solvent-borne Intumescent Coating is a single component solvent based, thin film intumescent coating for fire protection of external and internal structural steelwork.

USES:

ZONE Phoenix 170-120 is designed for application by airless spray to provide cellulosic fire resistance for periods of up to 120 minutes on structural steel I-sections (columns and beams) and hollow sections.

For use in internal dry controlled environments without topcoat. (C1 according to BS EN ISO12944-2:2017) and uncontrolled external and internal environments with topcoat (C3 according to BS EN ISO12944-2:2017). (See Weather Protection of Intumescent Steel Pg 2).

FEATURES:

- Solvent-borne technology
- Highly competitive loadings, refer to Zone DFT's
- Easy application properties
- No top coat required for concealed non-decorative steel
- Applied by ZONE's preferred applicator network for quality assurance and code compliance

Gloss	Flat
Colour	White
Film	DFT's as specified by Zone.
Thickness	Calculations are reported in Steelcalc
Volume Solids	75 ±3%
Thinner	Recommended Thinner No 2
Application	Airless Sprayer and Brush
Pack Size	20 litres 1.40kg/litre
Shelf Life	2 years from date of manufacture which is designated by "use by" date on pail, opened life 30-60 days only.
Flash Point	2°C

STORAGE CONDITIONS:

Store in temperatures between 10-30°C. Store in original un-opened containers. Protect from frost and freezing.

HEALTH & SAFETY:

Consult the SDS for safe handling and storage.

ENDORSEMENTS:

- Certfire Approved.
- Independently tested by Warrington Fire in accordance with BS 476: Part 20 & 21: 1987.
- This product has been tested and assessed in accordance with the ASFP fire testing protocol for cellular beam protection. See Section 4.1 from ASFP "Yellow Book" 5th Edition.
- Meets the needs of the NZ Building Code.

PRACTICAL APPLICATION RATES:

	Airless Spray	Brush
Dry	750	325
Wet	1000*	435

Lighter coats at a thinner film build will provide an architectural finish. *Maximum sag tolerance typically 1500µm wet by airless spray. If the maximum recommended thickness per coat is exceeded or high film thicknesses are overcoated prematurely, cracking may occur.

AVERAGE DRYING TIMES: Figures are a guide only

	@ 15°C	@ 23°C
To touch	30 minutes	20 minutes
To recoat	6 hours	4 hours
Seal*1 / Top coat	Product must be cured for top coat application	
To handle	Depends on thickness applied	

No more than two coats by airless spray should be applied within any 24 hour period. Factors such as air movement and humidity must also be considered. (See Application Conditions & Overcoating pg 2).

RECOMMENDED PRIMERS:

A range of primers have been tested and approved for use under ZONE Phoenix 170-120. Please consult Zone for a detailed list.

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SEALER / TOPCOATS:

If it can be guaranteed that application and subsequent in-service conditions will be in a C1 environment as defined in AS/NZS2312:2014 then no topcoat is required for internal environments.

*1 The application of Altex Pro-Seal Intumescent Base Coat is accepted as a sealer coat for temporary exterior weather protection prior to the application of an approved top coat system.

Recommended top coats are as follows for external environments:

Sherwin Williams Acrolon 750	Gloss, two-component high solids, acrylic polyurethane
Sherwin Williams Acrolon 775	Semi-Gloss, two-component high solids, acrylic polyurethane

Consult ZONE for further advice on other accepted topcoats.

SURFACE PREPARATION:

General	All surfaces should be clean, dry and free from surface contamination.
Steel	Abrasive blast clean to a minimum class Sa 2 1/2 thorough blast clean finish to AS 1627, Part 4 or SSPC-SP10 near white metal.
Galvanised Steel	Remove grease, oil and other solvent-soluble contaminants. Dry and immediately abrade surfaces to provide an adhesion key.
Zinc Rich Epoxy Primer Spot Prime	A tie-coat of Sherwin Williams Macropoxy 250 primer is required. Small areas maybe prepared by power tool clean to level SP3.

Wire brush and shop primers are not acceptable methodologies for fire rated systems.

APPLICATION EQUIPMENT:

Airless Sprayer	Nozzle size: 19-21 thou depending on application requirements
Pressure	175kg/cm ² (2500 psi) minimum
Fan Angle	30°

The airless sprayer is intended as a guide only. Details such as fluid hose length and diameter, paint temperature, job shape and size all have an effect on the spray tip and operating pressure chosen is available during application. Consult ZONE as required.

APPLICATION CONDITIONS & OVERCOATING:

A minimum ambient air temperature of 10°C is required to ensure proper film formation. **Relative humidity shall not exceed 80% to ensure proper film formation.** Coating can be retarded at high humidity levels. Substrate temperature shall be at least 3°C above the dew point and always above 0°C. In conditions of high relative humidity good ventilation conditions are essential during the curing process. Protect from frost at all times.

This material must be protected from moisture during the drying period. Moisture ingress prior to drying may affect the integrity and fire protective properties of the coating.

Phoenix 170-120 is capable of withstanding external exposure without a topcoat providing:
The product is allowed to dry for at least 24 hours at 15°C in dry conditions with good air movement and ventilation.

Extended overcoat times may be required at low temperatures and / or high film thicknesses. Introduce airflow at 2m/s to speed up drying. The use of a commercial dehumidifier during "tenting" of a building is acceptable as it assists continuation of application.

WEATHER PROTECTION OF INTUMESCENT:

ZONE PHOENIX Intumescent Coatings are recommended to be site applied.

After appropriate drying (see above), Phoenix 170-120 intumescent can be exposed to the weather for up to 6 months **provided** that the specific use or storage ensures that the intumescent coated sections are protected against condensation, immersion, ponding, pooling, standing or flowing water on site or other site/transportation/storage circumstances.

Phoenix solvent intumescent coating must be top coated with approved topcoat system if the steelwork is likely to be exposed to weathering on site for long periods. Contact Zone for further details.

WARRANTY / DURABILITY:

Durability and Warranties are available. AS/NZS2312:2014, The Guide to the Protection of Steel against atmospheric corrosion by the use of Protective Coatings provides a summary of specifications suitable for specific categories. Please consult Zone prior to project commencement.

Any person or company using the product without first making further enquiries as to the suitability of the product for the intended purpose does so at their own risk, and Sherwin-Williams or Zone Architectural Products can accept no liability for the performance of the product, or for any loss or damage arising out of such use. The information detailed in this Data Sheet is liable to modification from time to time in the light of experience and of normal product development, and before using, customers are advised to check with Zone, quoting the reference number, to ensure that they possess the latest issue.