

# PHX 370-120H WATER BASED

INTUMESCENT FIRE RESISTANT COATING

## DESCRIPTION:

ZONE Phoenix 370-120H Water-based Intumescent Coating is a single component water based, low VOC (TCEP free), thin film intumescent coating for fire protection of internal structural steelwork.

## USES:

ZONE PHOENIX 370-120H 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 internal environments with topcoat (C3 according to BS EN ISO12944-2:2017). (See Weather Protection of Intumescent Steel Pg 2)

## FEATURES:

- Waterbased technology with ultra low VOC 0.19gms/litre (EPA Method 24). Suitable for Green Buildings.
- Highly competitive loadings, refer to Zone DFT's
- Easy application properties including low odour
- 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 Thickness	DFT's as specified by Zone. Calculations are reported in Steelcalc
Volume Solids	75 ±3%
Thinner	Water (thinning will have an adverse effect on sag tolerance)
Application	Airless Sprayer and Brush
Pack Size	20 litres 1.40kg/litre
Shelf Life	12 months from date of manufacture which is designated by "use by" date on pail, opened life 30-60 days

## 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 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	600	300
Wet	800*	400

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:

	@ 15°C	@ 23°C
To touch	3 hours	1.5 hours
To recoat	6 hours	4 hours
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 370-120H. 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 any other situation a topcoat must be applied, consult ZONE for further advice.

Recommended top coats are as follows

Sherwin Williams Acrolon 750	Gloss, two-component high solids, acrylic urethane
Sherwin Williams Acrolon 775	Semi-Gloss, two-component high solids, acrylic urethane
Sherwin Williams AquaTrim Enamel	Water-based enamel

Consult ZONE for further advice on other accepted topcoats.

## SURFACE PREPARATION:

<b>General</b>	All surfaces should be clean, dry and free from surface contamination.
<b>Steel</b>	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.
<b>Galvanised Steel</b>	Remove grease, oil and other solvent-soluble contaminants. Dry and immediately abrade surfaces to provide an adhesion key.
<b>Zinc Rich</b>	A tie-coat of Sherwin Williams Macropoxy 250 Primer is required.
<b>Epoxy Primer</b>	A tie-coat of Sherwin Williams Macropoxy 250 Primer is required.
<b>Spot Prime</b>	Small areas maybe prepared by power tool clean to level SP3.
<b>Wire brush and shop primers are not acceptable methodologies for fire rated systems.</b>	

## APPLICATION EQUIPMENT:

<b>Airless Sprayer</b>	Nozzle size: 17-21 thou depending on application requirements
<b>Pressure</b>	175kg/cm <sup>2</sup> (2500 psi)
<b>Fan Angle</b>	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 during application. Consult ZONE as required.*

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.

## 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.

**ZONE PHOENIX 370-120H WATER BASED INTUMESCENT COATING MUST BE APPLIED IN A DRY INTERNAL ENVIRONMENT.**

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.

## WEATHER PROTECTION OF INTUMESCENT DURING CONSTRUCTION:

ZONE Phoenix Intumescent Coatings are recommended to be site applied in a protected, dry environment. The use of a commercial dehumidifier during "tenting" of a building is acceptable as it assists continuation of application.

Occasionally impaired film formation such as cracking may occur on edges of flat angles and external or internal angles of structural steel, depending on geometry, over-application and ambient conditions. This does not detrimentally affect the fire performance properties of the product.

## 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.