

AQUA STEEL® WB+

TECHNICAL DATA SHEET

PRODUCT DESCRIPTION

AQUASTEEL WB+ is a white thin-film waterborne intumescent coating designed to provide 30 and 60 minutes fire resistance on standard structural steel members in internal environments.

APPEARANCE

AQUASTEEL WB+ is white, with a creamy consistency. If a finish is required, either for decoration or protection against moisture, a range of Finishes is available. Please consult Decor Ireland for an approved list of Finishes.

COVERAGE AND APPLICATION RATES

AQUASTEEL WB+ is suitable for all types of structural steel, subject to the following minimum steel thicknesses:-

Section	Flange/Wall Thickness	Hp/A
<i>Universal Beams 3 sided</i>	<i>Flange Thickness - 7.6mm</i>	<i>300m⁻¹</i>
<i>Universal Columns + 4 sided Beams</i>	<i>Flange Thickness - 6.8mm</i>	<i>300m⁻¹</i>
<i>Hollow Sections (½ Hour)</i>	<i>Wall Thickness - 4.0mm</i>	<i>300m⁻¹</i>
<i>Rectangular Hollow Sections (1 Hour)</i>	<i>Wall Thickness - 6.0mm</i>	<i>205m⁻¹</i>
<i>Circular Hollow Sections (1 Hour)</i>	<i>Wall Thickness - 8.0mm</i>	<i>140m⁻¹</i>

The table below gives the recommended coverage rates in m²/litre and wet and dry film thicknesses (WFT and DFT) in mm:-

Exposure	Horizontal Beams			Vertical Columns		
	m ² /litre	WFT	DFT	m ² /litre	WFT	DFT
	½ Hour Fire Resistance					
4-Sided	2.30	0.42	0.30	2.30	0.42	0.30
3-Sided	3.00	0.32	0.23	2.30	0.42	0.30
	1 Hour Fire Resistance					
4-Sided	0.50	1.78	1.28	0.50	1.78	1.28
3-Sided	1.20	0.83	0.63	0.50	1.78	1.28
	Hollow Sections					
	Square & Rectangular			Circular		
	½ Hour Fire Resistance					
4-Sided	1.20	0.83	0.63	0.40	2.33	1.68
	1 Hour Fire Resistance					
4-Sided	0.40	2.33	1.68	0.40	2.33	1.68

For thinner / lighter members, please consult Decor Ireland.

Maximum Application Rates per Coat are as follows:-

Application Type	m ² /litre	Wet Film	Dry Film
<i>Brush/Roller</i>	<i>1.00</i>	<i>1.00mm</i>	<i>0.72mm</i>
<i>Spray</i>	<i>0.67</i>	<i>1.50mm</i>	<i>1.08mm</i>

Theoretical Coverage / 0.5mm DFT: 1.43m²/litre; 0.93 kg/m².

PRODUCT SPECIFICATION

Specific Gravity:	1.35
Volume Solids:	72% ± 2%
VOC:	15 g/litre (conforms to 2010 European maximum of 140 g/litre.)

STORAGE INSTRUCTIONS

AQUASTEEL WB+ should be stored internally between 5°C and 30°C. At temperatures above 25°C, the shelf life will be reduced. Shelf life is normally 9 months in sealed containers.

PROTECT FROM FROST.

GENERAL SAFETY

- Ensure good ventilation during application and drying.
- In case of insufficient ventilation, wear suitable respiratory equipment.
- Do not breathe spray.
- Wear suitable protective clothing and gloves.
- After contact with skin, wash well with plenty of soap and water.
- In case of contact with eyes, rinse immediately with water and seek medical advice.
- Keep out of reach of children.
- When not in use keep containers tightly closed.

SURFACE PREPARATION

Steelwork to be coated with **Aquasteel WB+** must be primed with an Anti-Corrosion Primer suited to the intended environment of the building and applied to the Manufacturer's Specification with the exceptions that the Dry Film Thickness does not exceed 100 microns and that Thermoplastic, Bitumen or Chlorinated Rubber coatings are not used. If the steel has been galvanised or coated with a zinc-rich primer, a suitable tie-coat should be applied. Consult Decor Ireland for guidance.

Before applying **Aquasteel WB+**, patch prime any damaged areas and ensure the surface is dry, free from rust, oil, grease, dust and other contaminants. Existing decorative finishes must be removed.

SITE CONDITIONS DURING APPLICATION

AQUASTEEL WB+ is recommended for application and use on dry protected structural steel only. If the basecoat is allowed to get wet, it is likely to be damaged – blistering and wrinkling may occur.

AQUASTEEL WB+ should only be applied when the air and steel temperatures are above 5°C. Relatively humidity should be below 80% for successful application. Steel surface temperature

should be a minimum of 3°C above the dew point. Ensure the steel is dry and protected from contact with rain or condensation during the application, drying and curing process.

APPLICATION METHODS

AQUASTEEL WB+ is supplied ready for use and must not be thinned but should be thoroughly mechanically stirred prior to use. Suggested application equipment:-

Application Type	Details
Brush	3" Synthetic Filament Brush
Roller	4" Roller, 3/8" nap fabric
Airless Spray	Operating Pressure: 2500-300 psi Tip Size: 19-25 thou Fan Angle: 20°-40° Hose Diameter: 10mm, internal Hose Length: Not exceeding 60 metres

Airless Spraying:

AQUASTEEL WB+ may be applied up to a maximum wet film thickness (WFT) of 1.5mm in a single spray coat comprising of several quick passes. Achieving maximum loadings will depend on site conditions. It may be possible to apply two coats of **AQUASTEEL WB+** in one day, particularly if the atmospheric temperature is above 20°C and relative humidity below 70%. However, before doing this, ensure that the previously applied coat is dry, particularly in the web/flange junctions.

Brush/Roller Application:

Low surface temperatures may cause slumping at recommended coverage rates. To achieve maximum thickness when brushing, use a "laying on" technique with a well-loaded brush.

Drying times between coats (20°C and 60% RH) are as follows:-

Brush/Roller – 4 hours

Spraying – 6 hours

If applying Aquasteel WB+ off-site, ensure the coating is fully cured, hard and dry before transport and erection, any damaged areas being made good. **PROTECT FROM FROST AND WETTING UNTIL DRY.**

LIMITS OF EXPOSURE

Protect from rain and wetting during drying and overcoat with recommended Finish if exposure exceeds 2 weeks, otherwise blistering and crazing may occur.

This information is offered in good faith but without guarantee or liability. In cases of doubt, users should consult with relevant authority. Information given herein is supplied for your guidance only and is based upon the results of controlled tests and experience obtained in the application of the product referred to by Decor Ireland. As the supplier only, Decor Ireland has no control over the method or conditions of application of the product and consequently no warranties expressed or implied are intended to be given as to the coverage or performance of the products mentioned or referred to herein and no liability will be excepted for any loss, damage or physical injury from the use or application of the information, data or products mentioned or referred to herein.

Aquasteel and Zeroflame are Trade Marks of Decor Ireland.

Telephone: BELFAST (028) 9083 4910 DUBLIN (01) 840 3969

Fax: BELFAST (028) 9083 4919 DUBLIN (048) 9083 4919

Email: info@decorireland.com

Issue Date 01/12/08

Page 3 of 3