Protective & Marine Coatings

FAST-CLAD™ 7220
EPOXY ZINC PHOSPHATE

Revised 03/2020 Issue 5

PRODUCT INFORMATION

PRODUCT DESCRIPTION

A multi-functional low temperature curing phenalkylated zinc phosphate coating for the protection of carbon steel

RECOMMENDED USE

Specified for use as a primer for structural steel on blast cleaned steel for internal and external environments, it may also be used as a high build intermediate coat as well as the final coat where a low sheen industrial and functional finish is required.

Not for immersion service.

Where good colour and gloss retention is required in an external environment, or a full decorative finish is required in an internal environment, one of our topcoats designed specifically for this role should be chosen. A selection of available topcoats is listed in this data sheet under Recommended Topcoats.

Fast-Clad 7220 may be applied between 75 and 225 microns DFT in one coat depending on specification requirement. As many projects will differ in terms of client requirements and exposure environments, detailed project specifications are available from Sherwin-Williams separately.

ENDORSEMENTS

Meets the performance requirement of BS EN ISO12944-2:2017 (C5) as part of a three coat system.

RECOMMENDED APPLICATION METHODS

Airless Spray
Conventional Spray
Brush
Roller

Recommended Thinner: No 2 (for thinning)
No 9 or No 13 (for cleaning)

PRODUCT CHARACTERISTICS

Flash Point: Base : 24°C Additive : 28°C

% Solids by Volume: 68 ± 2% (ASTM-D2697-03:2014)

Pot Life: 5 hrs at 5°C 2 hrs at 15°C 1 hr at 23°C

Colour Availability: Light Grey, Dark Grey, Red Oxide, White

VOC
255 gms/litre determined practically in accordance with UK Regulations PG6/23
283 gms/litre calculated from formulation to satisfy EC Solvent Emissions Directive
185 gms/kilo content by weight from formulation, to satisfy EC Solvent Emissions Directive

RECOMMENDED THICKNESS

Dry film thickness	Wet film thickness	Theoretical coverage
75 microns	110 microns	9.07m²/ltr*

* This figure makes no allowance for surface profile, uneven application, overspray or losses in containers and equipment. Film thickness will vary depending on actual use and specification

PRACTICAL APPLICATION RATES - MICRONS PER COAT

	Airless Spray	Conventional Spray	Brush	Roller
Dry	75*	75	65	60
Wet	110	110	96	88

** Maximum sag tolerance typically 441µm wet (300µm dry) by airless spray*

AVERAGE DRYING TIMES

	@ -5°C	@ 0°C	@ 5°C	@ 15°C	@ 23°C
To touch:	50 mins	45 mins	40 mins	30 mins	15 mins
To recoat:	5 hours	4 hours	3 hours	2 hours	1 hour
To handle:	7 hours	5.5 hours	4.5 hours	3 hours	2 hours

These figures are given as a guide only. Factors such as air movement and humidity must also be considered.

RECOMMENDED TOPCOATS

Indefinitely overcoatable with epoxy systems provided the surfaces to be coated have been suitably cleaned. Where a high degree of gloss and colour retention is required overcoat with Acrolon 7300, Acrolon C137V2, Acrolon C237 or Acrolon 1850 finishes. In the case of recoating Fast Clad 7220 with these top coats after extended periods of time (without maximum stated limits) the following conditions shall be matched in the moment of the finish application:

1. The previous coating has been applied at the recommended dry film thickness and in accordance with good painting practices. Is free from any application defects and the dry film is tightly adherent.

2. The surface is free from all type of contaminants such as soluble salts, oily and greasy materials and any other visible contamination that can affect intercoat adhesion.Any detected contamination shall be cleaned by adequate methods prior to the finish application.

3. Surface does not present burn marks or any type of defect caused by mechanical, chemical or other type of damage. All such damaged areas areas shall be repaired with the original coating system before applying the finish coat.

4. If under direct sunlight exposure for long periods the surface shall be checked for degraded superficial layer that can affect intercoat adhesion. If such layer is observed it should be removed by means of water jetting, abrading, solvent cleaning or other method considered to be suitable.

If applying FIRETEX single pack intumescent PFP products please consult Sherwin-Williams Technical Team for overcoating guidance

If applying alkyd systems consult Sherwin-Williams for advice on overcoating.

These overcoating times refer to achievement of optimum adhesion @ 23°C and will vary with temperature.

PACKAGE

A two component material supplied in separate containers to be mixed prior to use

Pack Size:	20 litre and 5 litre units when mixed
Mixing Ratio:	3 parts base to 1 part hardener by volume
Weight:	1.53 kg/litre (may vary with shade).
Shelf Life: Base	2 years from date of manufacture or 'Use By' date where specified
Shelf Life: Hardener	1 year from date of manufacture or 'Use By' date where specified

This Data Sheet is specifically subject to the disclaimer which can be found at http://protectiveemea.sherwin-williams.com/Home/Disclaimer"

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SURFACE PREPARATION

Blast clean to Sa2½ BS EN ISO 8501-1:2007. Average surface profile in the range 50-75 microns.
Ensure surfaces to be coated are clean, dry and free from all surface contamination.

Manually prepared surfaces should be prepared to a minimum standard of St3 BS EN ISO 8501-1:2007 at the time of coating. Application to such surfaces should be by brush or roller where the mechanical action will aid adhesion.

APPLICATION EQUIPMENT

Airless Spray	**For dft applications between 75-125µ**
Nozzle Size:	0.33mm (13 thou) - 0.38mm (15 thou)
Fan Angle:	40°
Operating Pressure:	155kg/cm² (2200 psi)

The airless spray details given above are intended as a guide only. Details such as fluid hose length and diameter, paint temperature and substrate shape and size all have an effect on the spray tip and operating pressure chosen. However, the operating pressure should be the lowest possible consistent with satisfactory atomisation. As conditions will vary from job to job, it is the applicators' responsibility to ensure that the equipment in use has been set up to give the best results. If in doubt Sherwin-Williams should be consulted.

Conventional Spray

Nozzle Size	:	1.27mm (50 thou)
Atomising Pressure:		2.8kg/cm² (40 psi)
Fluid Pressure	:	0.4kg/cm² (6 psi)

The details of atomising pressure, fluid pressure and nozzle size are given as a guide. It may be found that slight variations of pressure will provide optimum atomisation in some circumstances according to the set up in use. Atomising air pressure depends on the air cap in use and the fluid pressure depends on the length of line and direction of feed i.e. horizontal or vertical.
For application by conventional spray, it may be necessary to thin the paint by the addition of up to 10% Cleanser/Thinner No. 2. Where thinning has been carried out the wet film thickness must be adjusted accordingly.

This product must only be thinned using recommended thinners. The use of alternative thinners, particularly those containing ketones, can severely inhibit the curing properties of the coating

Brush and Roller
The material is suitable for brush and roller application. Application of more than one coat may be necessary to give equivalent dry film thickness to a single spray applied coat.

APPLICATION CONDITIONS AND OVERCOATING

This material should preferably be applied at temperatures in excess of 0ºC. Relative humidity should not exceed 90% and in these conditions good ventilation is essential.

Substrate temperature shall be at least 3ºC above the dew point and always above 0°C.

In order to achieve optimum water and chemical resistance, temperature needs to be maintained above 0ºC during curing.
If it is desired to overcoat outside the times stated on the data sheet, please seek advice of Sherwin-Williams.

ADDITIONAL NOTES

Drying times, curing times and pot life should be considered as a guide only.

Epoxy Coatings - Colour Stability:
Fast-Clad 7220 is not colour stable and significant colour changes will be observed with time. However, this does not affect the performance of the material.

Any areas touched-up and repaired with the same colour at a later date may be obvious due to this colour change.
When epoxy materials are exposed to ultra-violet light a surface chalking effect will develop. This phenomenon results in loss of gloss and a fine powder coating at the surface which may give rise to colour variation depending on the aspect of the steelwork. This effect in no way detracts from the performance of the system.

Epoxy Coatings - Tropical Use
Epoxy paints at the time of mixing should not exceed a temperature of 35°C. At this temperature the pot life will be approximately halved. Use of these products outside of the pot life may result in inferior adhesion properties even if the materials appear fit for application. Thinning the mixed product will not alleviate this problem.

The maximum air and substrate temperature for application is 50°C providing conditions allow satisfactory application and film formation. If the air and substrate temperatures exceed 50°C and epoxy coatings are applied under these conditions, paint film defects such as dry spray, bubbling and pinholing etc. can occur within the coating.
Numerical values quoted for physical data may vary slightly from batch to batch.

HEALTH AND SAFETY

Consult Product Health and Safety Data Sheet for information on safe storage, handling and application of this product.

WARRANTY

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 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 Sherwin-Williams, quoting the reference number, to ensure that they possess the latest issue.

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