



Protective & Marine Coatings
METAGARD G280
PRODUCT TECHNICAL DATA

Revised 07/2013 Issue 16

PRODUCT INFORMATION

PRODUCT DESCRIPTION		
METAGARD G280 PRIMER		
Material Type: A two pack epoxy zinc free prefabrication primer.		
RECOMMENDED USE		
A temporary protective for steel surfaces prepared by abrasive blast cleaning.		
Rapid drying suitable for use in automatic blast and spray plants.		
Suitable for welding, cutting and forming when applied at the recommended dry film thickness.		
ENDORSEMENTS		
Approved by MOD/DRA to AFS No.1848 Complies with NES 757 Annex A Table A. Newcastle Occupational Health (Industrial Division) Welding Health and Safety Report No7548/04		
RECOMMENDED APPLICATION METHODS		
Airless Spray Conventional Spray		
Recommended Cleanser/Thinner: No 5		
PRODUCT CHARACTERISTICS		
Flash Point: Base : 12°C Additive : 13°C		
% Solids by Volume: 27 ± 1% (ASTM-D2697-86)		
Pot Life: 10 hrs @ 15°C, 8 hrs @ 23°C		
Colour Availability: Limited range.		
VOC 618 gms/litre determined practically in accordance with UK Regulations PG6/23 643 gms/litre calculated from formulation to satisfy EC Solvent Emissions Directive 559 gms/kilo content by weight from formulation, to satisfy EC SED.		
TYPICAL THICKNESS		
Dry film thickness	Wet film thickness	Theoretical coverage
25 microns	93 microns	10.8 m ² /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
Dry	25	25
Wet	93	93

AVERAGE DRYING TIMES		
	At 15°C	At 23°C
To touch:	5 minutes	3 minutes
To recoat:	4 hours	2 hours
To handle:	9 minutes	6 minutes
<i>These figures are given as a guide only. Factors such as air movement and humidity must also be considered.</i>		
RECOMMENDED TOPCOATS		
Can be overcoated with a wide variety of materials, the choice of system being dependent on exposure conditions.		
PACKAGE		
A two component material supplied in separate containers to be mixed prior to use.		
Pack Size:	20 litre units when mixed.	
Mixing Ratio:	3 parts base to 1 part additive by volume.	
Weight:	1.15 kg/litre.	
Shelf Life:	12 months from date of manufacture or 'Use By' date where specified.	



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SURFACE PREPARATION

For optimum performance use round steel shot and blast clean to Sa2½ BS EN ISO 8501-1:2007. Average surface profile in the range 30-50 microns. Ensure surfaces to be coated are clean, dry and free from all surface contamination.

APPLICATION EQUIPMENT

Airless Spray

Nozzle Size : 0.38mm (15 thou)
Fan Angle : 80°
Operating Pressure : 140kg/cm² (2000 psi)

The airless spray details given above are intended as a guide only. Details such as fluid hose length and diameter, paint temperature and job 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 : 3.5kg/cm² (50 psi)
Fluid Pressure : 0.35-0.7kg/cm² (5-10 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.

APPLICATION CONDITIONS AND OVERCOATING

The material should preferably be applied at temperatures in excess of 10°C. In conditions of high relative humidity, ie 80-85% good ventilation conditions are essential. Substrate temperature should be at least 3°C above the dew point and always above 0°C.

At application temperatures below 10°C, drying and curing times will be significantly extended, and spraying characteristics may be impaired.

Application at ambient air temperatures below 5°C is not recommended.

In order to achieve optimum water and chemical resistance, temperature needs to be maintained above 10°C 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.

The curing reaction of epoxies commences immediately the two components are mixed, and since the reaction is dependent on temperature, the curing time and pot life will be approximately halved by a 10°C increase in temperature and doubled by a 10°C decrease in temperature.

Preparation and Build-Up: This material is not intended to replace a coat of primer in the main paint specification, it is designed to provide temporary protection until the specified paint scheme can be applied. However, in practice the use of this material does make a substantial contribution to the performance of the complete paint specification in terms of ultimate durability and resistance to corrosion.

Where this material has been subject to exposure prior to overcoating, thorough cleaning down will be required to ensure that all traces on contamination (e.g. dust, oil, grease, salts, etc.) are removed before application of the full paint system.

The applied dry film thickness of prefabrication primers is normally below 30 microns. At this level of dry film thickness, factors such as blast profile, unevenness of application and severity of exposure conditions may significantly affect the performance, especially immersion or water pooling.

This material should be overcoated before any breakdown, such as peak rusting occurs. If such breakdown occurs as a result of extended exposure, re-preparation of the substrate by flash blasting or mechanical methods will be necessary.

Fabrication: While this material is classed and approved as a welding primer, under certain types of welding operations e.g. high speed twin-fillet welding, fabricators are advised to satisfy themselves that the product is suitable for their particular welding process.

Stability: Highly pigmented, low solids materials are prone to settling in the can. This will in no way affect the product performance provided the material is thoroughly stirred prior to use. 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.