



Protective & Marine Coatings

MACROPOXY™ M111 EPOXY WET BLAST PRIMER

FORMERLY KNOWN AS EPIGRIP M111

PRODUCT INFORMATION

Revised 02/2024 Issue 24

PRODUCT DESCRIPTION

A 2-pack epoxy zinc phosphate primer

RECOMMENDED USE

For application to surfaces which have been prepared by wet abrasive blasting. May also be applied to grit blasted surfaces and for surfaces prepared by UHP water blasting where existing blast profile is exposed.

Tolerant to application to surfaces which may be damp or wet at the time of application. An acceptable 'wet' surface is defined as a surface on which a thin film of moisture is present, but is free from running water, droplets or pooled water.

RECOMMENDED APPLICATION METHODS

- * Airless Spray
- * Conventional Spray
- * Brush (See Additional Notes overleaf)

Recommended Thinner: No 5

PRODUCT CHARACTERISTICS

Flash Point:	Base : 9°C	Additive : 9°C
% Solids by Volume:	54 ± 4% (ASTM-D2697-91)	
Pot Life:	10 hours at 15°C	8 hours at 23°C
Colour Availability:	Red Oxide	

VOC

383 gms/litre determined practically in accordance with UK Regulations PG6/23

416 gms/litre calculated from formulation to satisfy EC Solvent Emissions Directive

269 gms/kilo content by weight from formulation, to satisfy EC Solvent Emissions Directive

TYPICAL THICKNESS

Dry film thickness	Wet film thickness	Theoretical coverage
50 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. (See additional notes overleaf)

PRACTICAL APPLICATION RATES - MICRONS PER COAT

	Airless Spray	Conventional Spray
Dry	50*	50
Wet	93	93

* Maximum sag tolerance typically 100µm dry by airless spray.

AVERAGE DRYING TIMES

	@ 15°C	@ 23°C
To touch:	30 minutes	15 minutes
To recoat:	6 hours	4 hours
To handle:	24 hours	16 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 C137V2, Acrolon C237, Acrolon 1850 and Acrolon 7300 within 7 days at a minimum dft of 50 microns. These overcoating times refer to achievement of optimum adhesion at 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:	4 parts base to 1 part additive by volume
Weight:	1.55 kg/litre
Shelf Life:	12 months from date of manufacture or 'Use By' date where specified.



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SURFACE PREPARATION

Dry abrasive blast to Sa2½ BS EN ISO 8501-1:2007. Average surface profile in the range 50-75 microns.

UHP or Aquagrit water blasted surfaces must also reveal an underlying surface equivalent to Standard Wa2½ (BS EN ISO 8501-4:2006). Light flash rust staining (as defined in Section 6 BS EN ISO 8501-4:2006) is acceptable provided it cannot be removed by rubbing.

Manually prepared surfaces are acceptable for non-immersed situations and should be prepared to a minimum standard of ST3 BS EN ISO 8501-1:2007 and must be clean, dry and free from all surface contamination at the time of coating.

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	: 3.52kg/cm² (50 psi)
Fluid Pressure	: 0.49kg/cm² (7 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.

Brush

The material is suitable for brush application, provided that it is applied to DRY, blasted steel. Brush application onto wet/damp steel will have a negative effect on the dry film properties. Due to the quick drying nature of the material, brush application at ambient temperatures greater than 20°C is not recommended.

APPLICATION CONDITIONS AND OVERCOATING

Epoxy paints 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 shall 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

Recommended Thickness

The thicknesses quoted are for application onto damp, wet abrasive blasted substrates. When applying onto dry blasted substrates, it may be necessary to apply up to 75 microns dry film thickness (139 microns wet film thickness) in order to obtain a continuous film.

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.

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.