



METAGARD K232

PRODUCT TECHNICAL DATA

FULL DESCRIPTION	: METAGARD K232 ZINC RICH EPOXY PRIMER		
MATERIAL TYPE	: A high zinc content 2-pack epoxy		
RECOMMENDED USE	: Anti-corrosive protection of steel surfaces prepared by abrasive blast cleaning. : May be applied as a blast primer at 20 microns dft (normally overcoated with zinc based primers) or as a full primer coat at 50 microns dft.		
ENDORSEMENTS	: Complies with BS5493:1977 - Table 4A - Type AP1B. : Network Rail - Item No. 7.1.3. : Complies with BS4652:1995 (amended 1998) : Highway Agency Item No 109		
RECOMMENDED APPLICATION METHODS	: Airless Spray : Conventional Spray		
COLOUR AVAILABILITY	: Grey		
FLASH POINT	: Base : 13°C		: Additive : 13°C
% SOLIDS BY VOLUME	: 45 ± 2% (ASTM-D2697-86)		
V.O.C.	: 436 gms/litre determined practically in accordance with UK Regulations PG6/23 : 495 gms/litre calculated from formulation to satisfy EC Solvent Emissions Directive : 211 gms/kilo content by weight from formulation, to satisfy EC SED		
TYPICAL THICKNESS	Dry film thickness	Wet film Thickness	Theoretical coverage
As Blast Primer	: 20 microns	45 microns	22.5 m ² /ltr*
As Full Primer	: 50 microns	111 microns	9.0m ² /ltr
	<i>Maximum sag tolerance with overlap typical 100µm by airless spray.</i> <i>* 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.</i>		
PRACTICAL APPLICATION RATES- microns per coat		Airless Spray	Conventional Spray
	: Dry	20	20
	: Wet	45	45
AVERAGE DRYING TIMES @ 20µ:	At 15°C	At 23°C	
To touch	: 4 minutes	2 minutes	
To recoat	: 3 hours	2 hours	
To handle	: 4 minutes	2 minutes	
	<i>These figures are given as a guide only. Factors such as air movement and humidity must also be considered.</i>		
RECOMMENDED THINNER	: Cleanser/Thinner No. 5		
RESISTANCE TO	: Moisture - Excellent	Abrasion - Excellent	
	: Petroleum solvents - Good	Weather - Excellent (Subject to zinc salts)	
RECOMMENDED TOPCOATS	: Indefinitely overcoatable with epoxy systems provided a minimum of 50 microns dft is applied. : See additional Notes – Exposure to Weathering overleaf. : Do not overcoat with paints containing saponifiable resins such as oleo-resinous or alkyd based paints unless a non-saponifiable resin based barrier coat has been applied first.		
POT LIFE	: 10 hours at 15°C	8 hours at 23°C	
PACKAGE	: A two component material supplied in separate containers to be mixed prior to use.		
	Pack Size	: 5 litre units when mixed.	
	Mixing Ratio	: 1.91 parts base to 1 part additive by volume.	
	Weight	: 2.35 kg/litre.	
	Shelf Life	: 18 months from date of manufacture or 'Use By' date where specified.	

SURFACE PREPARATION:

Blast clean to Sa2½ BS EN ISO8501:2007 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 : 1.76kg/cm² (25 psi)
Fluid Pressure : 0.35kg/cm² (5 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.

Stirring - The utilisation of a mechanical stirrer on the pressure pot is strongly recommended, alternatively very thorough stirring by hand mechanical means before and during use.

APPLICATION CONDITIONS AND OVERCOATING:

Epoxy paints should preferably be applied at temperatures in excess of 10°C. In conditions of high relative humidity, i.e. 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.

Exposure to Weathering - If Metagard K232 is exposed to the weather, there is a risk of the formation of zinc salts on the surface, which must be removed by flash blasting or washing down prior to overcoating, otherwise intercoat adhesion may be adversely affected.

The rate and extent of zinc salt formation will vary from one location to another. Under severe conditions eg marine coastal, offshore or heavy industrial areas, it is strongly recommended that overcoating takes place within 7 days.

Fabrication - If not applied in excess of the recommended dry film thicknesses Metagard K232 Zinc Rich Epoxy Primer should not interfere with the normal processes of fabrication including rolling, marking, forming, riveting, etc. Electrical welding or flame cutting of steel coated with Metagard K232 Zinc Rich Epoxy Primer should only be carried out with the aid of efficient local exhaust ventilation to prevent any health hazard to the operators.

While Metagard K232 Zinc Rich Epoxy Primer is classed and approved as a welding primer, under certain types of welding operations eg high speed twin-fillet welding, fabricators are advised to satisfy themselves that the product is suitable for their particular welding process.

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.

It is not advisable to apply Metagard K232 when the air and substrate temperatures exceed 45°C, or the substrate temperature exceeds 55°C. These conditions can introduce paint film formation defects, such as dry spray, bubbling and pinholing etc. For application outside these temperature limits it is recommended that advice is sought from Sherwin-Williams.

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.

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.