EPIGRIP C400V3

PRODUCT TECHNICAL DATA

FULL DESCRIPTION	:	EPIGRIP C400V3 QUICK DRYING ZINC PHOSPHATE PRIMER/BUILDCOAT
MATERIAL TYPE	:	A quick drying high build 2-pack epoxy zinc phosphate primer/buildcoat
RECOMMENDED USE	:	Anti-corrosive protection of carbon steel surfaces prepared by abrasive blast cleaning.
	:	Can be applied at thicknesses between 75 and 275 microns dry to provide both primer and buildcoat in a single coat. A top coat is only required for decorative purposes.
	:	For use in internal/external conditions, including offshore and petrochemical applications
ENDORSEMENTS	:	BS476 Part 7 - Surface Spread of Flame
	:	BS6853 Appendix D - Smoke Emissions - For details of substrate/scheme, consult Leighs Customer Service Department.
RECOMMENDED APPLICATION METHODS	:	Airless Spray (blast cleaned surfaces only)
	:	Conventional Spray
	:	Brush
	:	Roller
COLOUR AVAILABILITY	:	Limited range including two MIO shades, Dark Grey (R8050) and Light Grey (R8051)
FLASH POINT	:	Base : 24°C Additive : 26°C
% SOLIDS BY VOLUME	:	70 ± 3% (ASTM-D2697-91)
V.O.C.	:	257 gms/litre determined practically in accordance with UK Regulations PG6/23
	:	289 gms/litre calculated from formulation to satisfy EC Solvent Emissions Directive
	:	190 gms/kilo content by weight from formulation, to satisfy EC SED

TYPICAL THICKNESS

Dry film thickness	**Wet film thickness**	**Theoretical coverage**
75 microns	107 microns	9.3 m^2/ltr*

The minimum specification for MIO shades is 100µm nominal dry film thickness.

** 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	107	107	92	85

** Maximum sag tolerance typically 400µm dry by airless spray and 125µm by brush.*

AVERAGE DRYING TIMES

	At 15°C	**At 23°C**	**At 35°C**
To touch	1½ hours	1 hour	¾ hour
To recoat	5 hours	3½ hours	2 hours
To handle	15 hours	7 hours	4 hours

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

RECOMMENDED THINNER	:	Leighs Cleanser/Thinner No. 2 (for thinning)
	:	Leighs Cleanser/Thinner No. 9 or No. 13 (for cleaning)
RESISTANCE TO	:	Moisture - Excellent Aliphatic solvents - Excellent
		Acid spillage - Moderate Abrasion - Excellent
		Alkali spillage - Excellent Weather – Excellent (subject to chalking)
		Petroleum Solvents : Excellent
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 Resistex C137V2, Resistex C237 within 7 days at a minimum dft of 50 microns or in the case of Resistex K651 or Leighs C750V2 overcoat within 4 days. These overcoating times refer to achievement of optimum adhesion at 23°C and will vary with temperature.
	:	For overcoating with alkyd systems consult Leighs Customer Service Department for advice.
	:	Overcoatable with Envirogard M770 Water Based Finish within 1 month @ 15°C.
POT LIFE	:	2½ hours at 15°C 1½ hours at 23°C 1 hour at 35°C
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	:	7 parts base to 1 part additive by volume
Weight	:	1.57 kg/litre (may vary with shade).
Shelf Life	:	2 years from date of manufacture or 'Use By' date where specified.

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SURFACE PREPARATION:

Blast clean to Sa.2½ BS EN ISO 8501-1:2001. 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 ST.3 BS EN ISO 8501-1:2001 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**	**For dft applications between 125-300µ**
Nozzle Size	:	0.33mm (13 thou)	0.38mm (15 thou)
Fan Angle	:	40°	40°
Operating Pressure	:	155kg/cm² (2200 psi)	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 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 Leighs Customer Service Department should be consulted. For MIO shades, use the 125-300µm recommendations.

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% Leighs Cleanser/Thinner No. 2. Where thinning has been carried out the wet film thickness must be adjusted accordingly.

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 10ºC. Relative humidity should not exceed 90% and in these conditions good ventilation is essential. Substrate temperature should be at least 3ºC 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 10ºC during curing.
If it is desired to overcoat outside the times stated on the data sheet, please seek advice of Leighs Customer Service Department.
For full notes, see data sheet entitled 'Spreading Rates and Overcoating Times'.

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.

Epoxy Coatings - Colour Stability:

Variable colour stability is a feature of epoxy materials which tend to yellow and darken with age whether used on internal or external areas. Therefore 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.