



Protective & Marine Coatings

MACROPOXY™ C123 EPOXY GLASS FLAKE

FORMERLY KNOWN AS EPIGRIP C123

Revised 02/2016 Issue 9

PRODUCT INFORMATION

PRODUCT DESCRIPTION

A high solids 2-pack epoxy, pigmented with glass flake and anti-corrosive

RECOMMENDED USE

Anti-corrosive protection of blast cleaned steel. Especially suitable for steel structures, bridges and infrastructure in aggressive atmospheric conditions

ENDORSEMENTS

Network Rail Item 7.2.3.
Highways Agency Item No. 123

RECOMMENDED APPLICATION METHODS

Airless Spray
Brush (for stripe coat and touch-up only)

Recommended Cleanser / Thinner: No 2

PRODUCT CHARACTERISTICS

Flash Point: Base: 40°C Additive: 41°C

% Solids by Volume: 83±4% (ASTM-D2697-91)

Pot Life: 1 hour at 23°C 30 mins at 35°C

Colour Availability: Limited range

VOC

131 gms/litre determined practically in accordance with UK Regulations PG6/23
161 gms/litre calculated from formulation to satisfy EC Solvent Emissions Directive
107 gms/kilo content by weight from formulation, to satisfy EC Solvent Emissions Directive

RECOMMENDED THICKNESS

Dry film thickness	Wet film thickness	Theoretical coverage
250 microns	301 microns	3.3m ² /ltr*
400 microns	482 microns	2.1m ² /ltr*

Maximum sag tolerance typically 720µm wet (600µm dry) by airless spray

**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	Brush
Dry	400*	250
Wet	482	302

AVERAGE DRYING TIMES

	@ 15°C	@ 23°C
To touch:	4 hours	2½ hours
To recoat:	8 hours	2½ hours
To handle	18 hours	12 hours

These figures are at 250µm dry and are given as a guide only. Factors such as air movement and humidity must also be considered

RECOMMENDED PRIMERS

Compatible with a wide range of Macropoxy, Zinc Clad Epoxy primers and buildcoats.

RECOMMENDED TOPCOATS

Indefinitely self overcoatable provided the coating has been suitably cleaned. For optimum intercoat adhesion with other epoxy topcoats, overcoating should occur within 14 days. Where atmospheric exposure is required, overcoat with Acrolon C137V2 within 7 days at a minimum dft of 50 microns or in the case of Acrolon C750V2 overcoat within 4 days. These overcoating times refer to achievement of optimum adhesion at 23°C and will vary with temperature. For overcoating outside the above parameters and with alkyd systems, consult Sherwin-Williams for advice

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: 1.52 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 Sa2½ (ISO 8501-1:2007). Average surface profile in the range 50-100 microns.

Ensure surfaces to be coated are clean, dry and free from all surface contamination.

Macropoxy L574 or Macropoxy M111 should be specified where there is a requirement for a blast primer. Other blast primers should not be used without reference to Sherwin-Williams.

APPLICATION EQUIPMENT

Airless Spray

Nozzle Size : 0.48-0.58mm (17-23 thou)

Fan Fan Angle : 40°

Operating Pressure : 235kg/cm² (3360 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.

N.B. C123 is capable of being applied by brush at 250 microns dft as a stripecoat, or for touch up of small areas.

APPLICATION CONDITIONS AND OVERCOATING

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

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. 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 & 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.

ADDITIONAL NOTES