

**PRODUCT NAME****Epoxy Powder**

ISSUE DATE 22/9/2005

PRODUCT CODE 317 SERIES

**PRODUCT DESCRIPTION**

A series of epoxy-based powder coatings designed where the user requires superior mechanical and chemical performance combined with excellent corrosion resistance.

The range typically exhibits an outstanding flow and aesthetical appearance. It may be used for decorative purposes, however the binder system is particularly suited to applications where the user requires resistance to aggressive environments.

There are many applications for this range, particularly in the functional coatings market, for example busbar insulation, water pipe protection, battery casings, etc.

An ultra-fast OR ultra-low temperature cure version is available. See 327 series.

**PRODUCT PROPERTIES**

A thermosetting powder coating based on a carefully selected blend of epoxy resins and curing agents.

**Gloss**

Gloss &gt;90%

Semi-gloss 60% ± 5

Matt 30%

Dead Matt 4%



## TECHNICAL PROPERTIES

### General

All tests carried out on degreased iron-phosphated steel coated with black epoxy gloss to 70 $\mu$ m and cured at 10 minutes @ 180°C object temperature.

### 317 series epoxies offer:

- Excellent resistance to corrosion
- Excellent resistance against chemicals
- Excellent adhesion
- High surface hardness

### Hardness (ISO 2815) Buchholz Indentation Test

>80

### Flexibility-Bend Test (ISO 1519)

(BS 3900: Part E1: 1970)

>5 mm (3/16 inch) diameter Mandrel

### Adhesion (ISO 2409)

Cross hatch (BS 3900: Part E6: 1974)

Classification Gt 0

### Cupping Test (ISO 1520)

(BS 3900: Part E4: 1976)

>5 mm

### Impact Test – Falling Weight (ECCA T5)

(BS 3900: Part E7: 1974)

>25 kg cm (N)



## CURING INFORMATION

### Normal Cure:

See box label for curing conditions, the following is typical for the range:  
10 minutes at 180° Celsius (Object Temperature)

### Fast Cure:

7 minutes at 150° Celsius (Object Temperature)



## CORROSION RESISTANCE

### Neutral Salt Spray (ASTM B117)

More than 1000 hours with creepage of corrosion less than 2mm from scribe mark.

### Resistance to Mortar (ASTM C 207)

Easy to remove. No staining

### Kersternich Test (ISO 3231)

DIN 50018 KFW2.0S

More than 10 cycles with creepage less than 2mm from scribe mark.

### Humidity (DIN 50017, BS 3900: Part F2: 1973)

More than 1000 hours without any effect.

### Boiling Water Resistance

After 2 hours boiling water, or 1 hour pressure cooker: no defects or detachment.



## CHEMICAL RESISTANCE

These values are typical for the range. If a specific resistance is required, please contact your local HMG representative.

The range shows excellent resistance to: brine, water, sulphuric acid, phosphoric acid, sodium hydroxide, acetic acid (dilute), petroleum, crude oil, toluene, Xylene, acetone, alcohols, urea.

The range will also offer limited resistance to: hydrochloric acid, nitric acid, ammonia, methyl ethyl ketone, and hydrogen peroxide.

**COLOUR RANGE**

Any standard or submitted colour standard

**GENERAL INFORMATION**

<b>SPECIFIC GRAVITY</b>	1.20 – 1.90 g/cm <sup>3</sup> depending on colour.
<b>COVERAGE</b>	From 10 – 14 m <sup>2</sup> /kg at 60 microns film thickness.
<b>STORAGE</b>	Store between 5°C - 25°C. When not in use, cans must be kept sealed
<b>SHELF LIFE</b>	Store in a dry, cool (<20°C) environment – 6 months.

**CLEANING**

Ensure surfaces to be coated are dry and must be cleaned using the appropriate HMG product to remove all traces of contaminants.

HMG produce a full range of cleaners, silicone removers, degreasers and preparatory cleaners suitable for the cleaning process.

Please refer to our website for Knowledge Base article Prep-Cleaning Techniques (KNB0009) and Preparatory Cleaners from the Product Guide.

**SURFACE PREPARATION**

Please refer to Knowledge Base for details on Surface Preparation.

**HEALTH AND SAFETY**

Refer to Health & Safety Data Sheet prior to use.

This range does NOT contain triglycidyl isocyanurate (TGIC)

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is to the best of HMG's knowledge and belief accurate and reliable as of the date indicated. However, no representation, warranty or guarantee is made as to its accuracy, reliability or completeness. It is the user's responsibility to satisfy themselves as to the suitability and completeness of such information for their own particular use. For professional use only.