

ENDURACOAT EHB

SELECTION DATA

GENERIC TYPE: Cross-linked polyamide epoxy.

GENERAL PROPERTIES: ENDURACOAT EHB is a self priming, high solids, mid gloss, high build epoxy mastic. It can be applied by spray, brush or roller over hand or power tool cleaned steel and is compatible with most existing coatings and tightly adhered rust. The cured film provides a tough, cleanable surface and is available in a wide variety of colours.

- Single-coat corrosion protection
- Excellent chemical resistance
- Good flexibility and lower stress upon curing than most epoxy coatings
- Excellent tolerance of damp (not wet) substrates
- Very good abrasion resistance

RECOMMENDED USES: Recommended where a high performance, chemically resistant epoxy coating is desired. Offers outstanding protection for interior floors, walls, piping, equipment and structural steel or as an exterior coating for railcars, structural steel and equipment in various corrosive environments. Industrial environments include Chemical Processing, Offshore Oil and Gas, Food Processing, Pharmaceutical, Water and Waste Water Treatment, Pulp and Paper and Power Generation among others. May be used as a two coat system direct to metal or concrete for water and municipal waste water immersion. Acceptable for use in incidental food contact areas and as a lining for hopper cars carrying food grade plastic pellets when processed according to FDA criteria (ref: FDA 21 CFR 175.300). Consult Polymer Group for other specific uses.

NOT RECOMMENDED FOR: Strong acid or solvent exposures, immersion service other than water, exterior weathering where colour retention is desired, such as a finish for tank exteriors or over chlorinated rubber and latex coatings.

TYPICAL CHEMICAL RESISTANCE:

Exposure	Immersion	Splash & Spillage	Fumes
Acids	NR	Very Good	Very Good
Alkalies	NR	Excellent	Excellent
Solvents	NR	Very Good	Excellent
Salt Solutions	Excellent	Excellent	Excellent
Water	Excellent	Excellent	Excellent

TEMPERATURE RESISTANCE: (Non-Immersion)

Continuous:	121°C
Non-Continuous:	149°C

At temperatures above 107°C, coating discolouration and loss of gloss can be observed, without loss of film integrity.

SUBSTRATES: Apply over suitably prepared metal, concrete, or other surfaces as recommended.

COMPATIBLE COATINGS: May be applied directly over inorganic zincs, weathered galvanising, epoxies, phenolics or other coatings as recommended. A test patch is recommended before use over existing coatings. A mist coat of ENDURACOAT EHB is required when applied over inorganic zincs to minimise bubbling. May be topcoated with polyurethanes or acrylics to upgrade weathering resistance. Not recommended over chlorinated rubber or latex coatings. Consult Polymer Group for specific recommendations.

April 2016 replaces June 2013

SPECIFICATION DATA

THEORETICAL SOLIDS CONTENT OF MIXED MATERIAL:*

	By Volume
ENDURACOAT EHB	75% ± 2%

VOLATILE ORGANIC CONTENT:*

As supplied: 214 grams/litre

Thinned:

Thinner	Fluid Grams/litre	Grams/Litre
P2	60	250
P2	97	271
P33	120	285

* Varies with colour

RECOMMENDED DRY FILM THICKNESS PER COAT:

100-150 microns

150-200 microns DFT for a more uniform gloss over inorganic zincs, or for use over light rust.

In more severe environments a second coat of 100-150 microns is recommended.

Dry film thickness in excess of 250 microns per coat is not recommended. Excessive film thickness over inorganic zinc may increase damage during shipping or erection.

THEORETICAL COVERAGE:

30 sq. m/l at 25 microns 6.0 sq.m/l at 125 microns.

Mixing and application losses will vary and must be taken into consideration when estimating job requirements.

STORAGE CONDITIONS: Store Indoors

Temperature: 4-43°C Humidity: 0-100%

SHELF LIFE: 36 months when stored at 24°C

COLOURS: Available in Colour Chart, BS5252, Aluminium and MIOX colours. Some colours may require two coats for adequate hiding.

GLOSS: Semi gloss (Epoxies lose gloss, discolour and eventually chalk in sunlight exposure).

ORDERING INFORMATION

Prices may be obtained from your Polymer Group Sales Representative.

APPROXIMATE SHIPPING WEIGHT:

	8-l Kit	20-l Kit
ENDURACOAT EHB	12.2 kg	30.5 kg
	4-l	20-l
Thinner P2	4 kg	18 kg
Thinner P33	4 kg	20 kg

FLASH POINT: (Setaflash)

ENDURACOAT EHB Part A	23°C
ENDURACOAT EHB Part B	22°C
THINNER P2	- 5°C
THINNER P33	32°C

APPLICATION INSTRUCTIONS

These instructions are not intended to show product recommendations for specific service. They are issued as an aid in determining correct surface preparation, mixing instruction sand application procedure. It is assumed that the proper product recommendations have been made. These instructions should be followed closely to obtain the maximum service from the materials.

SURFACE PREPARATION: Remove all oil or grease from surface to be coated with Thinner P2 in accordance with SSPC-SP 1.

Steel: For mild environments Hand Tool or Power Tool Clean in accordance with SSPC-SP 2, SSPC-SP 11 to produce a rust-scale free surface. For more severe environments, abrasive blast to a Commercial Finish in accordance with SSPC-SP 6 and obtain a 40- to 75-micron blast profile. For immersion service, abrasive blast to a Near White Metal Finish in accordance with SSPC-SP10 and obtain a 40- to 75-micron blast profile.

Concrete: Must be cured at least 28 days at 21°C and 50% R.H. or equivalent time. Remove fins and other protrusions by stoning, sanding or grinding. Abrasive blast to open all surface voids and remove all form oils, incompatible curing agents, hardeners, laitance and other foreign matter and produce a surface texture similar to that of a medium grit sandpaper. Voids in the concrete may require surfacing. Blow or vacuum off sand and dust.

MIXING: Power mix separately, then combine and power mix in the following proportions:

	8-Litre Kit	20-Litre Kit
ENDURACOAT EHB Pt A	4 litres	10 litres
ENDURACOAT EHB Pt B	4 litres	10 litres

THINNING: For spray applications, may be thinned up to 10% with Thinner P2. For hot and windy conditions, or for brush and roller application, may be thinned up to 12% with Thinner P33.

Use of thinners other than those supplied or approved by Polymer Group may adversely affect product performance and void product warranty, whether express or implied.

POT LIFE: Three hours at 24°C and less at higher temperatures. Pot life ends when material loses film build.

APPLICATION CONDITIONS:

	Material	Surfaces	Ambient	Humidity
Normal	16-29°C	16-29°C	16-32°C	0-80%
Minimum	10°C	10°C	10°C	0%
Maximum	32°C	52°C	43°C	90%

Do not apply or cure the material when the surface temperature is less than 3°C above the dew point.

Special thinning and application techniques may be required above or below normal conditions.

SPRAY: This is a high solids coating and may require slight adjustments in spray techniques. Wet film thicknesses are easily and quickly achieved. The following spray equipment has been found suitable and is available from manufacturers such as Binks, DeVilbiss and Graco.

Conventional: Pressure pot equipped with dual regulators, 3/8 I.D. minimum material hose, .070" I.D. fluid tip and appropriate air cap.

Airless:

Pump Ratio:	30:1 (min) *
GPM Output:	3.0 (min)
Material Hose:	3/8" I.D. (min.)
Tip Size:	.017-.021"
Output pressure:	2,100-2,300 psi
Filter Size:	60 mesh

* Teflon packings are recommended and are available from the pump manufacturer.

BRUSH OR ROLLER: Use medium bristle brush, or good quality short nap roller. Avoid excessive rebrushing and rerolling. Two coats may be required to obtain desired appearance, hiding and recommended DFT. For best results, tie-in within 10 minutes at 24°C.

DRYING TIMES: These times are based on a 125 microns dry film thickness. Higher film thicknesses, insufficient ventilation or cooler temperatures will require longer cure times and could result in solvent entrapment and premature failure.

Dry to Touch: 2½ hours at 24°C
Dry to Handle: 6½ hours at 24°C

Surface Temperature	Recoating With Itself	Dry to Topcoat	Final Cure
10°C	12 hours	24 hours	3 days
16°C	8 hours	16 hours	2 days
24°C	4 hours	8 hours	1 day
32°C	2 hours	4 hours	16 hours

Excessive humidity or condensation on the surface during curing can interfere with the cure, can cause discoloration and may result in a surface haze or blush. Any haze or blush must be removed by water washing before recoating. During high humidity conditions, it is recommended that the application be done while temperatures are increasing. For best results over "damp" surfaces, apply by brush or roller.

Maximum Recoat or Topcoat Times at 24°C

With Epoxies - 30 days
With Polyurethanes - 90 days

If the maximum recoat time has been exceeded, surface must be abraded by sweep blasting prior to the application of any additional coats.

Minimum cure time before immersion service is 5 days at 24°C surface temperature. Cure at temperatures below 16°C is not recommended for immersion service.

VENTILATION & SAFETY: WARNING: VAPOURS MAY CAUSE EXPLOSION. when used as a tank lining or in enclosed areas, thorough air circulation must be used during and after application until the coating is cured. The ventilation system should be capable of preventing the solvent vapour concentration from reaching the lower explosion limit for the solvents used. In addition to ensuring proper ventilation, fresh air respirators or fresh air hoods must be used by all application personnel. where flammable solvents exist, explosion-proof lighting must be used. Hypersensitive persons should wear clean, protective clothing, gloves and/or protective cream on face, hands and all exposed areas.

CLEANUP: Use Thinner P2.

CAUTION: READ AND FOLLOW ALL CAUTION STATEMENTS ON THIS PRODUCT DATA SHEET AND ON ALL MATERIAL SAFETY DATA SHEETS FOR THIS PRODUCT.

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CAUTION: CONTAINS FLAMMABLE SOLVENTS. KEEP AWAY FROM SPARKS AND OPEN FLAMES. IN CONFINED AREAS WORKMEN MUST WEAR FRESH AIRLINE RESPIRATORS. HYPERSENSITIVE PERSONS SHOULD WEAR GLOVES OR USE PROTECTIVE CREAM. ALL ELECTRIC EQUIPMENT AND INSTALLATIONS SHOULD BE MADE AND GROUNDED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE. IN AREAS WHERE EXPLOSION HAZARDS EXIST, WORKMEN SHOULD BE REQUIRED TO USE NONFERROUS TOOLS AND TO WEAR CONDUCTIVE AND NON-SPARKING SHOES.

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