

SELECTION & SPECIFICATION DATA

Generic Type	Polyamide epoxy with corrosion inhibitor (zinc phosphate)
Description	A high performance, immersion grade (fresh & salt water) chemically cured, zinc phosphate epoxy primer. Suitable for use over suitably prepared mild steel, galvanised steel, other non-ferrous metals, and most GRP substrates.
Features	<ul style="list-style-type: none"> • Excellent adhesion to difficult substrates • Excellent holding primer • Excellent corrosion resistance • Complies with AS/NZS 3750.13 (2 pack epoxy primer), Types 1, 2 & 3. • Good abrasion resistance • Very good aged re-coatability • Resists splash and spillage or fumes of a wide range of chemicals • Easy application by brush, roller or spray • Versatile - can be used on most substrates under many different types of topcoat • Long pot-life • Excellent maintenance touch-up primer for hand-cleaned substrates • A user-friendly primer for epoxy or polyurethane systems in environments not suited to zinc primers due to acidic or alkaline fallout or splash & spill • Excellent tie-coat over high build epoxies as an extended 2-3 day recoat window with Sea~Barrier Antifoul series. Refer to Technical Services for further advice
Colour	Light grey
Gloss	Flat
Primer	<p>Self-priming. May be used as a tie-coat over zinc rich primers such as Carbozinc 15-625, Carbozinc 11, and Altra~Zinc[®] 605.</p> <p><i>Altra~Zinc[®] is the registered trade mark of Altex Coatings</i></p>
Dry Film Thickness	<p>51 - 76 microns (2 - 3 mils) per coat</p> <p>Optimum DFT is 50 microns - Do not exceed 75 microns</p>
Solids Content	<p>By Volume 50%</p> <p>(ASTM D2697 - 7 days)</p>
Theoretical Coverage Rate	<p>19.7 m² at 25 microns (802 ft² at 1.0 mils) 9.8 m² at 50 microns (401 ft² at 2.0 mils) 6.6 m² at 75 microns (267 ft² at 3.0 mils) Allow for loss in mixing and application.</p>
VOC Value(s)	432 grams per litre (mixed)
Dry Temp. Resistance	<p>Continuous: 90°C (194°F) Non-Continuous: 121°C (250°F)</p> <p>Discolouration will be observed above 93°C</p>

Carboguard 504 ZP

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Limitations	Not suitable for exposure to strong solvents. Avoid excessive dry film thickness. Exceeding 75 microns will compromise rate of cure and may result in solvent entrapment. Low temperatures, high humidity and poor ventilation will exacerbate the problem. Not intended for long term exterior exposures without a topcoat. Exterior exposure will cause early loss of sheen, possible discolouration and chalking. This will not affect the protective properties of the coating.
Topcoats	Epoxies, polyurethanes, and antifoulings.

SUBSTRATES & SURFACE PREPARATION

General	Surfaces must be clean and dry. Employ adequate methods to remove dirt, dust, oil and all other contaminants as described in SSPC-SP 1 (AS 1627.1).
Steel	For optimum performance in industrial & marine environments, abrasive blast to SSPC-SP 10 (AS 1627.4 Sa 2½) and achieve a uniform jagged blast profile of 35µm (minimum) and up to 75µm. Interior non-critical exposures: Abrasive Blast SSPC-SP 6 (AS 1627.4 Sa 2) and achieve a uniform jagged blast profile of 35µm (minimum) and up to 75µm. For site repairs and where abrasive blasting can not be employed, power tool clean all surfaces to SSPC-SP 3 (AS 1627.2 St 3).
Galvanised Steel	Ensure there are no chemical treatments that may interfere with adhesion; and abrade (80 grit) or sweep abrasive blast the surface to establish a suitable roughness (typically 25 microns). Avoid aggressive preparation that may remove the zinc coating. <u>Cleaned and roughened galvanizing should be coated immediately after preparation, particularly in humid conditions above 50% RH. Do not allow adhesion-compromising zinc hydroxide (white rust) to form before application.</u>
Concrete	Concrete should be fully cured for 28 days at 21°C and 50% RH or equivalent. Remove all laitance by sweep abrasive blasting, HP Water-Jetting or acid etching. For maximum performance and to reduce the risk of pin-holing seal the prepared concrete with Carboguard 1340.
Aluminium	For optimum performance it is recommended to sweep abrasive blast using fine, non-metallic media to attain a uniform matte finish, with a blast profile between 20 and 50 microns. Where abrasive blasting cannot be undertaken, abrasion by means of disc grinders and/or other power tools, using non-metallic abrasives with a grit range of 60-120 grit will achieve clearly discernible surface profile. Using Scotchbrite® to abrade aluminium surfaces is adequate for thin film systems. Thick film systems will require a greater surface profile size. <i>Scotchbrite® is a registered trademark of 3M Company</i>
Previously Painted Surfaces	Check existing surface for solvent-resistance and compatibility before commencing work. Sweep abrasive blast or lightly sand to roughen surface and degloss the surface. Existing paint must attain a minimum 3A rating in accordance with ASTM D3359 "X-Cut" adhesion test
Stainless Steel	Surface profile should be dense and angular, achieving a minimum of 25 microns and is best achieved through abrasive blasting with non-metallic media such as aluminium oxide.

MIXING & THINNING

Mixing	Mix each component separately, then combine and mix to the correct 4:1 proportions.
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MIXING & THINNING

- Thinning** | Spray: Thinning requirement will vary depending upon conditions. Thin with Thinner #12 as required for good atomisation; typically between 5% - 20%.
Brush / roller: Due to the initial lacquer dry characteristic of this coating additional thinning with Thinner #12 may be required for a smooth finish. It may be advantageous to use a slow evaporating solvent such as Thinner #25 in warm and/or windy conditions.
- Ratio** | 4:1 by volume (Part A : Part B)
- Pot Life** | 12 hours at 25°C (5 litre kit)

APPLICATION EQUIPMENT GUIDELINES

Listed below are general equipment guidelines for the application of this product. Job site conditions may require modifications to these guidelines to achieve the desired results.

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- Conventional Spray** | Pressure pot equipped with dual regulators, 9.5 mm (3/8") I.D. minimum material hose, 1.8 mm (.070") I.D. fluid tip and appropriate air cap. Hold gun 300-350 mm from the surface and at a right angle to the surface.
- Airless Spray** | Pump Ratio: 30:1
Volume Output: 10 l/minute min.
Material Hose: 9.5 mm (3/8") min.
Tip Size: .015-.019"
Output Press.: 2100-2400 psi
*Teflon packings are recommended and available from pump manufacturer.
- Brush & Roller (General)** | The desired film thickness can be achieved in a single brush or roller coat. Avoid excessive re-brushing or re-rolling. For best results, tie-in within 10 minutes at 24°C.

APPLICATION CONDITIONS

Condition	Material	Surface	Ambient	Humidity
Minimum	5°C (41°F)	5°C (41°F)	5°C (41°F)	0%
Maximum	32°C (90°F)	50°C (122°F)	50°C (122°F)	85%
Optimum	20°C (68°F)	20°C (68°F)	20°C (68°F)	50%

Industry standards are for substrate temperatures to be above the dew point.

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CURING SCHEDULE

Surface Temp.	Minimum Recoat Time w/ Epoxies	Minimum Recoat Time w/ Polyurethanes	Maximum Recoat Time w/ Epoxies	Maximum Recoat Time w/ Polyurethanes
5°C (41°F)	6 Hours	8 Hours	90 Days	28 Days
15°C (59°F)	2.5 Hours	5 Hours	90 Days	28 Days
25°C (77°F)	2 Hours	4 Hours	60 Days	14 Days
30°C (86°F)	1.5 Hours	3 Hours	30 Days	5 Days

Curing schedule is based on 50 microns DFT at 50% RH.

Topcoating with E-Line® 379:

E-Line® 379 has a limited time to topcoat window; maximum adhesion is obtained by strictly observing maximum topcoat window times listed below. When in doubt light sanding to a matte finish prior to topcoating is recommended.

Maximum: 10 days @ 5°C; 7 days @ 15°C; 5 days @ 25°C; 2 days @ 30°C

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Ambient Cure	Temperature Cautionary Note: The temperatures noted above refer to the time-weighted average substrate or coating temperatures NOT ambient air temperatures. In exterior situations surface temperatures can vary widely with sunlit surfaces often being greater than 20°C higher than the air temperature.
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CLEANUP & SAFETY

Cleanup	Use Thinner #2, #12 or acetone. In case of spillage, absorb and dispose of in accordance with local applicable regulations.
Safety	Read and follow all caution statements on this product data sheet and on the SDS for this product. Employ normal workmanlike safety precautions. Hypersensitive persons should wear protective clothing, gloves and use protective cream on face, hands and all exposed areas.
Ventilation	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.
Caution	This product contains flammable solvents. Keep away from sparks and open flames.

PACKAGING, HANDLING & STORAGE

Packaging	5 litre, and 10 litre kits
Shelf Life	Part A: 48 months at 24°C Part B: 24 months at 24°C Shelf Life: (actual stated shelf life) when kept at recommended storage conditions and in original unopened containers. For products/components exceeding the stated shelf life, contact Technical Services for further advice.
Storage Temperature & Humidity	4-38°C 0-95%
Flash Point (Setaflash)	Part A & B: 23°C
Storage	Store indoors and KEEP DRY

WARRANTY

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