

# ZINCANODE® 402

## Two Pack Zinc Rich Epoxy Primer

PC 122

- FEATURES**
- ZINC RICH EPOXY
  - RAPID DRY AND OVERCOAT TIMES
  - EASY TO TOPCOAT WITH EPOXIES, POLYURETHANES, AND CHLORINATED RUBBERS
  - SUITABLE FOR USE IN ENVIRONMENTS UP TO 200°C
  - PROVIDES EXCELLENT CORROSION PROTECTION

**USES** ZINCANODE® 402 is a two-pack epoxy zinc rich primer formulated for cathodic corrosion resistance in harsh corrosive environments. ZINCANODE® 402 is recommended for use over abrasive blast cleaned steel surfaces, especially where overcoating is required without special mist or seal coat techniques.

ZINCANODE® 402 offers ease of application, high film builds without mud-cracking and exceptional adhesion to field weld areas cleaned by power sanding or power wire brushing. It is specified for use in power generation plants, bulk handling equipment and oil refineries. Also in mining and chemical processes, offshore structures and exposed pipelines.

- SPECIFICATIONS**
- APAS 2916/1 - assessed and confirmed to meet all requirements on specific certified products.
  - AS/NZS 3750-9 Type 2
  - Certificate of test to AS/NZS 1530.3:1999 available for a specific system
  - Tested in accordance with AS 4100-1998 – Steel Structures Appendix J – Standard Test for Evaluation of Slip Factor
- Refer to a Dulux Protective Coatings Consultant for more details.

### RESISTANCE GUIDE

|                        |  |                 |  |
|------------------------|--|-----------------|--|
| <b>WEATHERABILITY</b>  | Epoxy coatings yellow with time and chalk on exterior exposure. Neither yellowing nor chalking detracts from the protective properties of the coating. Use a weatherable topcoat if required for appearance. | <b>SOLVENTS</b> | Good resistance to splash and spillage of aromatic and aliphatic hydrocarbon solvents and alcohols |
| <b>HEAT RESISTANCE</b> | Up to 200°C dry heat   | <b>WATER</b>    | Excellent resistance to fresh and salt water when suitably topcoated                               |
| <b>SALTS</b>           | Excellent resistance to neutral and alkaline salts when suitably topcoated   | <b>ALKALIS</b>  | Not recommended for alkaline conditions unless suitably topcoated                                  |
| <b>ACIDS</b>           | Not recommended for acid conditions  | <b>ABRASION</b> | Very good when fully cured   |

### TYPICAL PROPERTIES AND APPLICATION DATA (STANDARD HARDENER)

|                         |   |                                    |   |      |             |
|-------------------------|---|------------------------------------|---|------|-------------|
| <b>CLASSIFICATION</b>   | Zinc Rich Epoxy Primer  | <b>APPLICATION CONDITIONS</b>      |   |      |             |
| <b>FINISH</b>           | Matt  |                                    | Min   | Max  |             |
| <b>COLOUR</b>           | Grey and Green-Grey   | <b>Air Temp.</b>                   | 10°C  | 40°C |             |
|                         |   | <b>Substrate Temp.</b>             | 10°C  | 40°C |             |
|                         |   | <b>Relative Humidity</b>           |   | 85%  |             |
| <b>COMPONENTS</b>       | Two   | <b>COATING THICKNESS (MICRONS)</b> |   |      |             |
| <b>VOLUME SOLIDS</b>    | 48%   |                                    | Min   | Max  | Recommended |
| <b>VOC LEVEL</b>        | <460 g/L  | <b>Wet film per coat (µm)</b>      | 125   | 190  | 160         |
| <b>FLASH POINT</b>      | 32°C  | <b>Dry film per coat (µm)</b>      | 60  | 90   | 75          |
| <b>POT LIFE</b>         | 8 hours (4 litre kit, 25°C)   | <b>SUITABLE SUBSTRATES</b>         | Abrasive blast cleaned steel  |      |             |
| <b>MIXING RATIO V/V</b> | Part A : 4    Part B : 1  | <b>PRIMERS</b>                     | Not applicable  |      |             |
| <b>THINNER</b>          | 920-08925    Dulux® Epoxy Thinner   | <b>TOPCOATS</b>                    | Most Dulux® Protective Coatings topcoats  |      |             |
| <b>PRODUCT CODE</b>     | 730-81386    Part A – Green Grey<br>730-H0021    Part A – Grey<br>976-63033    Standard Hardener<br>976-H0114    Cold Cure Hardener | <b>APPLICATION METHODS</b>         | Conventional, airless spray or air assisted spray. Brush and roller only practical for small areas. |      |             |

### DRYING CHARACTERISTICS AT 75 µm DRY FILM THICKNESS\* (STANDARD HARDENER)

| Temperature | Humidity | Touch   | Handle   | Full Cure | OVERCOAT |                  |
|-------------|----------|---------|----------|-----------|----------|------------------|
|             |          |         |          |           | Min      | Max <sup>1</sup> |
| 10° C       | 50%      | 2 Hours | 17 Hours | 7 Days    | 17 Hours | 4 Weeks          |
| 15° C       | 50%      | 2 Hours | 10 Hours | 7 Days    | 10 Hours | 4 Weeks          |
| 25° C       | 50%      | 1 Hour  | 5 Hours  | 7 Days    | 5 Hours  | 4 Weeks          |

\*These figures are a guide only, as ventilation, film thickness, humidity, thinning and other factors will influence the rate of drying.

<sup>1</sup>If the maximum overcoat interval is exceeded then the surface MUST be abraded to ensure maximum intercoat adhesion.

**SPREADING RATE**    **6.4 square metres per litre equals 75 µm dry film thickness**  
 with Standard Hardener  
 assuming no losses  
 NOTE: Practical spreading rates will vary depending on such factors as application method, ambient conditions, surface porosity and roughness.

# ZINCANODE® 402

## COLD CURE HARDENER

### COATING THICKNESS (MICRONS)

|                        | Min | Max | Recommended |
|------------------------|-----|-----|-------------|
| Wet film per coat (µm) | 125 | 190 | 160         |
| Dry film per coat (µm) | 60  | 90  | 75          |

### APPLICATION CONDITIONS

|                               | Min | Max  |
|-------------------------------|-----|------|
| Air Temperature               | 5°C | 30°C |
| Substrate Surface Temperature | 5°C | 30°C |
| Relative Humidity             |     | 85%  |

|                  |                             |
|------------------|-----------------------------|
| SOLIDS BY VOLUME | 48%                         |
| VOC LEVEL        | <460 g/L                    |
| POT LIFE         | 8 hours (4 litre kit, 25°C) |

## DRYING CHARACTERISTICS AT 75 µm DRY FILM THICKNESS\* (COLD CURE HARDENER)

### OVERCOAT

| Temperature | Humidity | Touch   | Handle  | Full Cure | Min     | Max <sup>1</sup> |
|-------------|----------|---------|---------|-----------|---------|------------------|
| 10° C       | 50%      | 60 mins | 8 Hours | 7 Days    | 8 Hours | 4 Weeks          |
| 25° C       | 50%      | 30 mins | 4 Hours | 7 Days    | 4 Hours | 4 Weeks          |

\*These figures are a guide only, as ventilation, film thickness, humidity, thinning and other factors will influence the rate of drying

<sup>1</sup>If the maximum overcoat interval is exceeded then the surface MUST be abraded to ensure maximum intercoat adhesion

Use of fast or low temperature hardeners may result in increased yellowing and a reduction of gloss level

### SPREADING RATE

with Fast Cure Hardener  
assuming no losses

**6.4 square metres per litre equals 75 µm dry film thickness**

NOTE: Practical spreading rates will vary depending on such factors as application method, ambient conditions, surface porosity and roughness.

## TYPICAL SYSTEMS

This is a guide only and not to be used as a specification. Your specific project needs must be discussed with a Dulux Protective Coatings Consultant.

| SURFACE     | ENVIRONMENT   | PREPARATION GUIDE                          | SYSTEM  | DFT (µm)                          |
|-------------|---|--|---|-----------------------------------|
| STEEL – NEW | Very high corrosivity<br>(AS2312.1 Cat C5)<br>System PUR5         | Abrasive blast clean AS1627.4<br>Class 2.5 | 1 <sup>st</sup> Coat Zincanode® 402<br>2 <sup>nd</sup> Coat Duremax® MBE<br>3 <sup>rd</sup> Coat Weathermax® HBR  | 75 µm<br>200 µm<br>100 µm         |
| STEEL – NEW | Very high corrosivity<br>(AS2312.1 Cat C5)<br>Exceeds System PUR5 | Abrasive blast clean AS1627.4<br>Class 2.5 | 1 <sup>st</sup> Coat Zincanode® 402<br>2 <sup>nd</sup> Coat Duremax® GPE MIO<br>3 <sup>rd</sup> Coat Quantum® FX<br>4 <sup>th</sup> Coat Quantum® Clearcoat | 75 µm<br>200 µm<br>55 µm<br>45 µm |
| STEEL – NEW | Very high corrosivity<br>(AS2312.1 Cat C5)<br>Exceeds System PUR5 | Abrasive blast clean AS1627.4<br>Class 2.5 | 1 <sup>st</sup> Coat Zincanode® 402<br>2 <sup>nd</sup> Coat Duremax® GPE MIO<br>3 <sup>rd</sup> Coat QUANTUM® 221<br>4 <sup>th</sup> Coat QUANTUM® 221      | 75 µm<br>200 µm<br>50 µm<br>50 µm |
| STEEL – NEW | Very high corrosivity<br>(AS2312.1 Cat C5)<br>System PUR4         | Abrasive blast clean AS1627.4<br>Class 2.5 | 1 <sup>st</sup> Coat Zincanode® 402<br>2 <sup>nd</sup> Coat Duremax® GPE<br>3 <sup>rd</sup> Coat Weathermax® HBR  | 75 µm<br>125 µm<br>100 µm         |
| STEEL – NEW | Very high corrosivity<br>(AS2312.1 Cat C5)<br>System PUR4         | Abrasive blast clean AS1627.4<br>Class 2.5 | 1 <sup>st</sup> Coat Zincanode® 402<br>2 <sup>nd</sup> Coat Duremax® GPE<br>3 <sup>rd</sup> Coat Luxathane® HPX   | 75 µm<br>125 µm<br>50 µm          |
| STEEL – NEW | Very high corrosivity<br>(AS2312 Cat C5)                          | Abrasive blast clean AS1627.4<br>Class 2.5 | 1 <sup>st</sup> Coat Zincanode® 402<br>2 <sup>nd</sup> Coat Ferreko® No. 3<br>3 <sup>rd</sup> Coat Ferreko® No. 3   | 75 µm<br>100 µm<br>100 µm         |
| STEEL – NEW | Low-medium corrosivity<br>(AS2312.1 Cat C2-3)<br>System PUR 2a    | Abrasive blast clean AS1627.4<br>Class 2.5 | 1 <sup>st</sup> Coat Zincanode® 402<br>2 <sup>nd</sup> Coat Luxathane® HPX  | 75 µm<br>50 µm                    |

NOTE: If application is by brush or roller, additional coats will be necessary to achieve the minimum DFT and full opacity

# ZINCANODE® 402

|                            |  |
|----------------------------|--|
| <b>SURFACE PREPARATION</b> | <b>Steel:</b> Round off all rough welds, sharp edges and remove weld spatter. Remove grease, oil and other contaminants in accordance with AS1627.1. Degrease with Gamlen CA 1 (a free-rinsing, alkaline detergent) according to the manufacturer's written instructions and all safety warnings. Abrasive blast clean to a minimum of AS1627.4 Class 2.5 with a blast profile of 40 – 70 microns. Remove all dust brushing or vacuum.   |
| <b>APPLICATION</b>         | Mix each can thoroughly using a power mixer until the contents are uniform. Mix the contents of both packs together thoroughly with a power mixer and let stand for 10 minutes. Ensure clean-up solvent (Dulux® Epoxy Thinner) is available. Remix thoroughly before and during application  |
| <b>BRUSH/ROLLER</b>        | For small areas only. Apply even coats of the mixed material to the prepared surface. Thinning is not normally required, however, up to 50 ml/litre of Dulux® Epoxy Thinner (920-08925) can be added to aid application. When brushing and rolling additional coats may be required to attain the specified thickness.   |
| <b>CONVENTIONAL SPRAY</b>  | Thinning is not normally required, however, up to 50ml/litre of Dulux® Epoxy Thinner (920-08925) can be added to ease application. Ensure paint is regularly agitated during application to prevent settling.<br>Typical Set-up<br>Graco AirPro: 1.8mm (239543)<br>Pressure at Triton 308: 70-105 kPa (10-15 p.s.i.)<br>Pressure at Gun: 380-415 kPa (55-60 p.s.i.)  |
| <b>AIRLESS SPRAY</b>       | Standard airless spray equipment such as a Graco Xtreme 45:1 with a fluid tip of 15-17 thou (0.38-0.43mm) and an air supply capable of delivering 550-690 kPa (80-100 p.s.i.) at the pump. Ensure paint is regularly agitated during application to prevent settling. Thinning is not normally required but up to 50 ml/litre of Dulux® Epoxy Thinner (920-08925) may be added to aid application  |
| <b>PRECAUTIONS</b>         | This is an industrial product designed for use by experienced Protective Coating applicators. Ensure that you read and understand the safety precautions on the relevant Material Safety Data Sheets before using. The surface to be coated must be totally free of moisture and contaminants. Do not apply at temperatures below 10°C. Do not apply at relative humidity above 85% or when the surface is less than 3°C above the dewpoint. The rate of cure is dependent upon temperature. Where application conditions are outside the parameters stated in this Product Data Sheet, or where any variation to the recommendations within this document are sought, contact your Dulux® Consultant for written consent or specifications prior to application. Freshly mixed material must not be added to previously mixed material. DO NOT apply coatings of a saponifiable nature such as alkyds directly to this zinc rich product. |
| <b>CLEAN UP</b>            | Clean all equipment with Dulux® Epoxy Thinner (920-08925) immediately after use.   |
| <b>OVERCOATING</b>         | Degrease with Gamlen CA 1 according to the datasheet. Test adhesion of existing coating by standard cross hatch adhesion test. If the coating fails, remove it. High-pressure water wash at 8.3 to 10.3 MPa (1,200-1,500 p.s.i.) to remove chalk and dust. Abrade surface to provide a good key for the new coating. Epoxies must be abraded if recoated outside the recoat window.  |
| <b>SAFETY PRECAUTIONS</b>  | <b>Read Data Sheet, SAFETY DATA SHEET and any precautions on container labels. SAFETY DATA SHEET is available from Customer Service (13 23 77) or <a href="http://www.duluxprotectivecoatings.com.au">www.duluxprotectivecoatings.com.au</a></b>   |
| <b>STORAGE</b>             | Store as required for a flammable liquid Class 3 in a bunded area under cover. Store in well-ventilated area away from sources of heat or ignition. Keep containers closed at all times. Contents of container may be under pressure.  |
| <b>HANDLING</b>            | As with any chemical, ingestion, inhalation and prolonged or repeated skin contact should be avoided by good occupational work practice. Eye protection approved to AS1337 should be worn where there is a risk of splashes entering the eyes. Always wash hands before smoking, eating, drinking or using the toilet.   |
| <b>USING</b>               | Contents of container may be under pressure. Containers should be carefully opened by first placing a rag, then a hand, over the lid then gently easing the lid off. Use with good ventilation and avoid inhalation of spray mists and fumes. If risk of inhalation of spray mists exists, wear combined organic vapour/particulate respirator. When spraying, users must comply with their respective State Spray Painting Regulations.   |
| <b>FLAMMABILITY</b>        | This product is flammable. All sources of ignition must be eliminated in, or near the working area. DO NOT SMOKE. Fight fire with foam, CO <sub>2</sub> or dry chemical powder. On burning will emit toxic fumes.  |
| <b>WELDING</b>             | Avoid inhalation of fumes if welding surfaces coated with this paint. Grind off coating before welding.  |

| COMPANY INFORMATION  |   | PACKAGING, TRANSPORT AND STORAGE |  |
|--|---|----------------------------------|--|
| Dulux Protective Coatings a division of  |   | PACKAGING                        | Available in 4 litre and 10 litre packs            |
| DuluxGroup (Australia) Pty Ltd<br>1956 Dandenong Road, Clayton 3168<br>A.B.N. 67 000 049 427 | DuluxGroup (New Zealand) Pty Ltd<br>150 Hutt Park Road, Lower Hutt, NZ<br>A.B.N. 55 133 404 118 | TRANSPORTATION WEIGHT            | 2.12 kg/litre (Average of components)              |
|  |   | DAANGEROUS GOODS                 | Part A: Class 3 UN 1263<br>Part B: Class 3 UN 1263 |

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