



TECHNICAL DATA SHEET

RAPTOR EPOXY PRIMER

RAPTOR 2K EPOXY ANTI-CORROSIVE PRIMER 4:1 MIX

TECHNICAL DATA SHEET & PROCESS GUIDE

U-POL Raptor Epoxy primer is a 2K anti-corrosive VOC compliant primer with excellent salt spray resistance for application to most substrates.

- Suitable as a primer or as a primer filler for industrial refinish applications, the primer also provides excellent anti-rust protection.

PROPERTIES

- Easy to apply
- Excellent anti-corrosion resistance
- Good sanding
- Excellent topcoat gloss holdout
- Wet-on-wet process with a long open time for topcoat application
- Chromate and Lead free
- Excellent opacity and coverage

Available Colours

- Grey semi gloss

TECHNICAL DATA



Substrates

- Aluminium
 - Mild Steel
 - E-coat
 - Galvanized
 - SMC
 - Polyester Fillers
- surface preparation detailed below

| | Base | Mixed |
|--|--------|------------------|
| Viscosity | | 25 - 30 s/ DIN 4 |
| Solid content | 60.00% | 44.00% |
| Specific gravity g/cm³ | 1.35 | 1.27 |



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APPLICATION GUIDE

Hardener Selection

Please note this product is only compatible with the Epoxy Primer Hardener



Substrate Preparation

U-POL Epoxy Primer can be applied directly to suitably prepared rust without a requirement for chemical preparation.

In all cases, loose and flaky material should be removed to ensure that the metal is returned to be a sound substrate before applying the primer.

Sufficient abrasion / blasting must always be employed to create a key to ensure adhesion of the primer.

The degree of substrate preparation required depends on the severity of the prior corrosion and the exposure conditions anticipated during the coatings service life.

For light corrosion / mild exposure conditions mechanical hand preparation (for example to the industry standard method SSPC-SP2 (SSI-St3)) or mechanical powertool preparation (for example to the industry standard method SSPC-SP3 (SSI-St3)) may be sufficient to prepare the surface.

For heavy corrosion / severe exposure conditions, removal of rust by abrasive blasting (for example to the industry standard method SSPC-SP10 (SSI-SA2.5)) is recommended.

For work which carries a warranty of performance this is the advised method, as lifetime of the coating in severe conditions is enhanced by more rigorous surface preparation.

For more details on surface preparation of corroded surfaces it is recommended that specialist advice is sought, eg from NACE or other similar industry body. See <https://www.nace.org/home.aspx>

To achieve best results, good preparation is essential. Degrease with U-POL Degreasers (S2000, S2001 or S2002).

Abrade the surface as follows:

Bare Metal (mild steel): abrade with P80.

Aluminium and Galvanized abrade with P180.

U-POL Bodyfillers : dry sand with P180 - P240

Wood or plywood: dry sand with P180 -P240 to achieve a smooth surface free from loose fibres

GRP, SMC, Glass fibre, Polyester Filler: dry flat with P180 P240.

For all substrates, once abraded, clean once more with SYSTEM 20 Degreasers and dry thoroughly.



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Mixing Ratio

EPOXY PRIMER:Hardener

Standard Application

4:1 by volume

| Quantity | Weight of Primer | Weight of Hardener |
|----------|------------------|--------------------|
| 250ml | 270.0g | 47.5g |
| 500ml | 540.0g | 95.0g |
| 750ml | 810.0g | 142.5g |
| 1000ml | 1080.0g | 190.0g |
| 1250ml | 1350.0g | 237.5g |



Viscosity DIN 4 / sec

25 - 30

Working Pot-Life @ 20°C

2 hours

The time stated show effective life, however the material stays liquid for much longer but if used after this time will give unsatisfactory performance



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Compliant HVLP Gravity Gun

| | |
|-------------------------|---------------|
| Gun tip size | 1.4 - 1.8mm |
| Air Pressure at the gun | 1.8 - 2.2 bar |

Conventional spraygun

| | |
|-------------------------|---------------|
| Gun tip size | 1.6 - 1.9mm |
| Air Pressure at the gun | 3.5 - 4.5 bar |



Coats

| | |
|-----------------|--|
| Build / microns | 2 - 3 coats Dry Film Thickness approximately 75µ depending on application Wet Film Thickness approximately 140µ depending on application Theoretical coverage @75µ Dry Film Thickness is approximately 5.88sq.m/ltr |
|-----------------|--|



Flash-off @ 20°C

| | |
|---------------|---------|
| Between coats | 10 mins |
|---------------|---------|



Drying Times

| | |
|------------------|---------|
| Touch dry @ 20°C | 2 hours |
| Sandable @ 20°C | 8 hours |
| Sandable @ 60°C | 30 mins |
| Sandable @ 50°C | 45 mins |



Roller Application

Apply 3 coats allowing 5 -10 minutes flash off time between coats

Wet film thickness 45µ per coat
Dry film thickness 25µ per coat



Sanding

| Method | Initial | Final |
|------------------------|-------------|--------------|
| Wet Sanding by hand | P500 - P600 | P800 - P1000 |
| Wet Sanding by machine | P500 - P600 | P800 - P1000 |
| Dry Sanding by hand | P280 - P360 | P400 - P500 |
| Dry Sanding by machine | P280 - P360 | P400 - P500 |



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Over Painting

Wet - on - wet process @ 20°C air dry

After 60 minutes of the final coat and up to 7 days the epoxy primer can be directly overcoated with 2K polyurethanes such as U-POL RAPTOR without the need to reopen the surface by sanding. After 7 days the surface will need abrading as per the table above

Dry - on -dry process @ 20°C air dry

After 8 hours it can be overcoated with U-POL bodyfillers

Typically the Epoxy Primer formulation is used in Industrial refinish where RAPTOR or a 2K topcoat is directly applied

This Epoxy primer is not recommended for use with water based paint systems

STORAGE & VOC INFORMATION



Shelf Life

1 year from date of manufacture in sealed original containers.

Recommended Storage Temperature 5°C - 25°C

Equipment Cleaning Clean gun. Immediately after use with SYSTEM 20 thinner or gunwash.

Important Remarks

Do not use activated product beyond pot life. Activated material should not be returned to the original can of non-activated material. After 10 minutes standing, the paint may need mild agitation to reliquify before 2nd coat.

Do not apply when ambient temperature falls below 10°C or relative humidity exceeds 90%

Apply only one coat of Epoxy Primer if a Polyester Filler or Polyester Spray Filler is to be applied over the Epoxy Primer



VOC Information

The EU limit for this product (product category: IIB.(c) in ready to use form is 540 g/litre. The VOC content of this product in ready to use form is 499 g/litre.

Ready to use VOC g/l

| | Colour | Epoxy Primer |
|--|-----------------|--------------|
| | Grey semi gloss | 499 |

IMPORTANT: FOR PROFESSIONAL USE ONLY. Read full instructions before use.

This product contains hazardous materials and therefore appropriate personal protective equipment should always be used. Please refer to the label and consult the safety data sheet for full handling instructions and personal protection information. U-POL disclaims any liability where the user does not wear the recommended personal protective equipment. The above data is for information only and may change without prior notice. It is the Buyers responsibility to ensure the suitability of the products for their own use and check the information is up to date. The recommendation of use of our products and application in our technical data sheets are based on our knowledge and experience. These data sheets are available via your local stockist or via the U-POL website at WWW.U-POL.COM. U-POL is not responsible for the results obtained by others over whose methods we have no control and thereof U-POL is not liable for consequential or incidental damages including loss of profits.

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