U-POL RAPTOR Tough and Tintable Protective Coating is a 2K polyurethane coating that provides surfaces with a protective barrier that can withstand the toughest situations. RAPTOR Black and Tintable are also available.

**FEATURES**

**CUSTOMIZABLE**
Tint RAPTOR to match ANY Color, even white!

**DURABLE**
Provides a tough scratch and stain resistant surface.
Protects against rust and corrosion.

**UV RESISTANT**
Delivers a high level of fade resistance.

**WATER RESISTANT**
Provides a water resistant finish, keeping moisture out and reducing rust.

**RESISTANT**
Resistant to a wide range of chemicals including fuels, hydraulic oils, animal urine, salt water and more.

**QUICK & EASY TO USE**
Easy as Fill-Shake-Shoot.
Provides excellent adhesion across many substrates.
Easy to clean - simply hose off.
Can be applied with U-POL Application Gun, HVLP gun, roller or brush.
### TECHNICAL DATA SHEET & PROCESS GUIDE

#### BED LINER AND PROTECTIVE COATING

**RAPTOR**

**WHITE**

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**CERTIFICATES**

- **FIRE RESISTANCE**
  - RAPTOR has passed flammability testing for motor vehicles according to the test methods FMVSS 302, ISO 3795 & BS AU 169A.

- **SLIP RESISTANCE**
  - When used with RAPTOR Traction Additive it produces a finish meeting ASTM E303-93.

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**SUBSTRATES AND PREPARATION**

<table>
<thead>
<tr>
<th>Substrates</th>
<th>Original Paint</th>
<th>Galvanized*</th>
<th>Polyester Fillers</th>
<th>Fiberglass</th>
<th>E-coat*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bare Metal*</td>
<td></td>
<td></td>
<td>Rigid Plastic*</td>
<td>GRP</td>
<td>Concrete*</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>SMC</td>
<td>Wood*</td>
</tr>
</tbody>
</table>

*Some substrates require additional surface preparation before applying RAPTOR. See Substrate Preparation section for details.*

**Substrate Preparation**

To achieve best results with RAPTOR, good preparation is essential.

1. Remove all loose material and any rust from the surface to be coated.
2. Clean and degrease the surface.
3. Abrade the surface with the required grit sand paper (see below).
4. Re-clean the surface.
5. For hard to reach areas, like internal corners, etc., coat first with a suitable adhesion promoter, like GRIP#4 Universal Adhesion Promoter, for optimal adhesion.

* Aluminum, bare metal, and galvanized: Abrade with: Bare metal 80-180; Aluminum/Galvanized 120-180
  Localized rub-thrus: prime with an etch primer, such as two coats of U-POL ACID#8.
  Large exposed areas of bare metal: Full 2K primer system required for optimum adhesion and corrosion resistance.

* Rigid Plastic (ABF, SMC) and fiberglass: Abrade with 120-180. Clean and degrease.


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***Polyethylene, often found on ATVs, is a finicky material that has adhesion issues with most coatings. RAPTOR does not adhere to polyethylene, even with the use of adhesion promoter.***

* OEM E-Coat: Scuff the surface with an coarse abrasive pad then clean and degrease.
* Wood: RAPTOR can be applied directly to stable wood.
* Concrete: For best results, clean the surface and remove dust. Sealing is not required. If you do seal with proprietary concrete sealer, the surface must be sanded again before applying RAPTOR.
**TECHNICAL DATA SHEET & PROCESS GUIDE**

**BED LINER AND PROTECTIVE COATING**

**RAPTOR WHITE**

**MIXING**

**Mixing Ratio**
As simple as FILL - SHAKE - SHOOT

<table>
<thead>
<tr>
<th>RAPTOR : Hardener</th>
<th>U-POL Application Gun</th>
<th>HVLP Gravity Gun</th>
</tr>
</thead>
<tbody>
<tr>
<td>U-POL SYSTEM 20</td>
<td>3:1</td>
<td>3:1</td>
</tr>
<tr>
<td>Fast Urethane Reducers</td>
<td>Ready to use - no reducer needed</td>
<td>Reduce up to a maximum of 15% to reduce the texture and for about 25% more coverage*</td>
</tr>
</tbody>
</table>

*Addition of reducer will affect the product VOC.

RAPTOR is easy to mix. Simply FILL the RAPTOR coating bottle to the first ridge line "A" (250ml/0.5 pints of hardener). Replace the cap and SHAKE contents vigorously for at least 2 minutes. SHOOT as follows.

**Mixing by weight**

<table>
<thead>
<tr>
<th>Grams</th>
<th>Coating (A)</th>
<th>Hardener (B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000g</td>
<td>783g</td>
<td>217g</td>
</tr>
<tr>
<td>500g</td>
<td>392g</td>
<td>108g</td>
</tr>
</tbody>
</table>

Pot life of RAPTOR when activated is 60 minutes at 68°F (20°C).
Use of an accelerator, like U-POL Paint Rocket UP0735, is optional.
Only mix one bottle of RAPTOR at a time. Clean gun between mixes.
Tighten cap carefully. Overtightening the cap may cause the cap to split.

**2K ISOCYANATE HARDENER**

- Specially designed to provide optimum results independent of climatic conditions and size of repair.
- RAPTOR hardener must not be used on its own. It can only be used with RAPTOR coating.

**Shelf Life**
12 months in unopened containers. Lids must be replaced after every use.

**Storage Temperature**
41°F (5°C) - 77°F (25°C)
RAPTOR
WHITE

TECHNICAL DATA SHEET & PROCESS GUIDE

BED LINER AND PROTECTIVE COATING

APPLICATION

U-POL Application Gun (UP0726 or UP4880) Application

1. Remove cap from RAPTOR bottle with the mixed RAPTOR.
2. Attach the RAPTOR bottle to the U-POL Application Gun (UP0726) or the U-POL Professional Application Gun (UP4880).
3. Adjust the air pressure to 40-60 PSI.
4. Apply to the prepared surface with an even sweeping motion to obtain the desired texture.
5. If applying additional coats allow to flash off for 60 minutes between coats.

U-POL recommends that you spray a test panel with RAPTOR first to ensure the desired texture is achieved.

How to create common textures with a U-POL UP0726 Schutz Gun:

1. Standard texture through Schutz Gun:
   - Ø 60 PSI
   - Ø Distance from object: 1.5 foot
   - Ø 2 coats with an even sweeping motion

2. Coarse texture with U-POL Application Gun:
   - Ø Mix RAPTOR and allow to stand for 10-minutes
   - Ø 45 PSI
   - Ø Distance from object: 1.5 foot
   - Ø 2 coats: 1st with an even sweeping motion
     2nd dropping the coat over the first

How to create common textures with a HVLP gun:

3. Fine texture with HVLP gravity fed gun, 1.6-2.0mm
   - Ø Add 15% urethane reducer
   - Ø 29 PSI
   - Ø Distance from object: > 0.5 foot
   - Ø 2 coats: 1st coat: even wet coat
     2nd coat: reduce pressure and material flow to achieve a fine mist
RAPTOR WHITE

TECHNICAL DATA SHEET & PROCESS GUIDE

BED LINER AND PROTECTIVE COATING

4. Standard texture with HVLP gravity fed gun, 1.6-2.0mm
   - Add 15% urethane reducer
   - 29 PSI
   - Distance from object: > 0.5 foot
   - 1st and 2nd coats applied as even wet coats

The above specifications are based on our experience with RAPTOR and represent only a few examples of the types of textures that can be achieved. It is recommended that a trial application is made to fine tune the finish before applying onto the finished object.

Rolling RAPTOR

1. Pour mixed RAPTOR into a suitable paint tray.
2. Cut in all corners and hard to reach areas with a brush.
3. Apply using an open textured roller.
4. Load roller with the product and apply slowly using medium pressure.
   * Rolling RAPTOR creates a lower build than spraying RAPTOR. Additional coats will be necessary. RAPTOR requires a 60 minute flash off period between coats.

Do not use RAPTOR in extreme cold or hot temperatures. Ideal application temperature is 68°F (20°C) with humidity of less than 60%.

Coats

Applying 2 medium coats of RAPTOR is recommended.

1 Coat: 230μ (9.0 MILs)  2 Coats: 475μ (18.7 MILs)

As applied using U-POL Application Gun (UP0726)

All measurements are approximate and are dependent on the application method. See document "Indicative Consumption" for a variety of applications available from www.u-pol.com.

Flash-off / min @ 68°F (20°C)

Between coats

Wait 60 minutes between coats.

IMPORTANT! Do not place heavy loads on the surface until RAPTOR is fully cured. See dry times below.

Drying Times

Touch Dry @ 68°F (20°C)  Less than 1 hour
Through Dry @ 68°F (20°C)  5-7 days

* Reducing flash off time, excessive film build, and/or reduced temperatures will alter drying time. Do not allow RAPTOR to come in contact with water for at least 72 hours.
* Higher temperatures will result in shorter flash time, and colder temperatures will require a longer flash time. Higher film builds will extend the final cure time.
**RACTOR**

**White**

**TECHNICAL DATA SHEET & PROCESS GUIDE**

**BED LINER AND PROTECTIVE COATING**

**Baking**

RACTOR can be baked for 30 minutes @ 140°F (60°C). Baking will speed up the initial cure, but it is still recommended waiting 7 days for regular use.

**I.R. Cure**

I.R. curing is not recommended.

**Over Painting**

RACTOR can be overpainted with most modern paint systems. When overpainting, prep the surface as follows:

1. Let sprayed RAPTOR dry for 24 hours.
2. Abrade with a fine abrasive pad.
3. Clean and degrease.

**Adding RAPTOR Traction Anti-Slip Granules**

See RAPTOR Traction SOP.

**PROPERTIES**

**Data**

- **Flash point**: -0.4°F (-18°C)
- **Solid content**: Approx. 57%
- **Specific gravity**: Approx. 9.85lb/gal (1180g/l)

**Chemical Resistance**

- Diesel: No effect
- Petrol: Resistant to splashes
- Xylene: Resistant to splashes
- Hydraulic Oil: No effect
- NaOH: No effect
- Bleach: No effect
- Alcohol: No effect
- Urine: No effect

For further information see document entitled "ASTM D1308" available on www.u-pol.com for resistance to household chemicals.

- **Dielectric breakdown**: 4.8 kV/mm (122 V/Mil) ASTM D 149
- **Temperature Resistance**: -0.4°F to 212°F (-18°C to 100°C)
STORAGE & VOC INFORMATION

**Shelf Life**

2 years from date of manufacture in sealed original containers.

RAPTOR should be stored in cool, dry conditions in the original containers.

**Storage**

**Equipment Cleaning**

Clean spray gun between mixes. All equipment should be thoroughly washed with acetone immediately after use.

**VOC Information**

The EU limit for this product (product category: IIB(e) in ready to use form is 840 g/liter. The VOC content of this product in ready to use form is 479 g/liter.

### National Rule RAPTOR White 4L Kit

<table>
<thead>
<tr>
<th></th>
<th>Regulatory</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>As Received</td>
<td>310 g/l (2.59 lb/gal)</td>
<td>223 g/l (1.86 lb/gal)</td>
</tr>
<tr>
<td>As Applied</td>
<td>404 g/l (3.37 lb/gal)</td>
<td>327 g/l (2.73 lb/gal)</td>
</tr>
</tbody>
</table>

### 2.6 VOC RAPTOR White 4L Kit

<table>
<thead>
<tr>
<th></th>
<th>Regulatory</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>As Received</td>
<td>310 g/l (2.59 lb/gal)</td>
<td>223 g/l (1.86 lb/gal)</td>
</tr>
<tr>
<td>As Applied</td>
<td>291 g/l (2.43 lb/gal)</td>
<td>196 g/l (1.64 lb/gal)</td>
</tr>
</tbody>
</table>
Preparation

Q. Can RAPTOR be applied on top of a basecoat?
A. RAPTOR can be applied on top of a basecoat. The basecoat must be fully cured and properly prepared and sanded before applying RAPTOR.

Q. Can RAPTOR be applied on top of a powder coat?
A. Yes, RAPTOR can be applied on top of a properly prepared and sanded powder coat.

Q. Can you use automotive paint tape with RAPTOR?
A. Yes, you can use automotive tape with RAPTOR. Wait between 15-20 minutes after applying RAPTOR before removing the tape.

Technical Properties

Q. Can RAPTOR be reduced?
A. Yes, RAPTOR can be reduced up to 15%. When reducing RAPTOR, use a urethane based reducer.

Q. What is the gloss level of RAPTOR?
A. The gloss level of Black RAPTOR is approximately 10 gloss units, or a satin finish.

Q. What is the Shore Hardness of RAPTOR?
A. The Shore D value for fully cured RAPTOR is 85.

Q. Does RAPTOR contain any rubber?
A. No, there is no rubber in RAPTOR. RAPTOR is a thick polyurethane coating, which gives it great UV stability and impact resistance without the use of additives such as rubber.

Q. Is RAPTOR isocyanate free?
A. No, RAPTOR utilizes an isocyanate hardener.

Q. What is the maximum temperature after applied?
A. The maximum temperature after application is 185°F.
## PRODUCT CODES

<table>
<thead>
<tr>
<th>Product Code</th>
<th>UP Number</th>
<th>Description</th>
<th>Case Qty</th>
</tr>
</thead>
<tbody>
<tr>
<td>RLW/S4</td>
<td>UP4807</td>
<td>RAPTOR White 4L Kit</td>
<td>1</td>
</tr>
<tr>
<td>RLW/SV4</td>
<td>UP4808</td>
<td>RAPTOR White 2.6 VOC 4L Kit</td>
<td>1</td>
</tr>
<tr>
<td>RLW/200</td>
<td>UP4872</td>
<td>RAPTOR White 200L Drum</td>
<td>1</td>
</tr>
<tr>
<td>RLTR/SM</td>
<td>UP4800</td>
<td>RAPTOR Traction 200g Packet</td>
<td>20</td>
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<tr>
<td>GUN/1</td>
<td>UP0726</td>
<td>U-POL Application Gun</td>
<td>5</td>
</tr>
<tr>
<td>UP4880</td>
<td>UP4880</td>
<td>U-POL Professional Vari-Nozzle Application Gun</td>
<td>6</td>
</tr>
<tr>
<td>GRIP/AL</td>
<td>UP0799</td>
<td>GRIP#4 450ml Aerosol</td>
<td>6</td>
</tr>
<tr>
<td>ACID/AL</td>
<td>UP0741</td>
<td>ACID#8 Etch Primer 450ml Aerosol</td>
<td>6</td>
</tr>
<tr>
<td>ACID/1</td>
<td>UP0776</td>
<td>ACID#8 Etch Primer 1L</td>
<td>6</td>
</tr>
<tr>
<td>ROC/S</td>
<td>UP0735</td>
<td>Rocket Paint Accelerator 250ml Bottle</td>
<td>10</td>
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</tbody>
</table>
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