TOUGH AND TINTABLE PROTECTIVE COATING

AUTOMOTIVE
OFF-ROAD
MARINE
COMMERCIAL
INDUSTRIAL
AGRICULTURAL

www.u-pol.com
RAPTOR® IS A TOUGH AND TINTABLE PROTECTIVE COATING

It is resistant to scratches, mechanical damage, fuels, hydraulic oils, animal urine, salt water and more. Many applications are possible. We have compiled some of them by types of applications.

## HOME

11. Porches
12. Garage Floors
13. Steps
14. Walkways
15. Paths
16. Wood Decks
17. Patios
18. Ladder Steps
19. Wheelbarrows
20. Wagons
21. Basement Walls
22. Basement Floors
23. Tool Boxes
24. Gates
25. Pool Decks

## AUTOMOTIVE

1. Bed Liner
2. Automotive Undercoating
3. Total Body Protection
4. Running Boards
5. Body Panels
6. Trunk Interior
7. SUV Floors
8. Roll Bars
9. Wheel Arches
10. Chassis and other parts

## MARINE

26. Boat Decks
27. Boat Hulls
28. Docks
29. Cabin Floors
30. Inboard Boat Engine Parts
31. Ramps
32. Boardwalks
33. Oar Tips
34. Aluminium Boats
35. Bay Boats
36. Kayaks
37. Sailboats

### REFERENCE DESCRIPTION FORMAT PER CASE

<table>
<thead>
<tr>
<th>REFERENCE</th>
<th>DESCRIPTION</th>
<th>FORMAT</th>
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</thead>
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<tr>
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<td>RAPTOR® Black</td>
<td>1L Kit</td>
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<tr>
<td>RLT/S1</td>
<td>RAPTOR® Tintable</td>
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<td>RLH/5</td>
<td>RAPTOR® Hardener</td>
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<tr>
<td>RLTR/SM</td>
<td>RAPTOR® TRACTION Slip Resistant Additive</td>
<td>200g Bag</td>
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</table>
AGRICULTURAL
78. Tractor Bed
79. Horse Trailer
80. Silos
81. Fertilizer Equipment
82. Farm Equipment
83. Ploughs

INDUSTRIAL
56. Containment Areas
57. Cement Truck Hoppers
58. Loading Ramps
59. Loading Docks
60. Skips
61. Equipment Handles
62. Asphalt Coverings
63. Heavy Duty Equipment Buckets
64. Machinery Casings
65. Tanker Trucks
66. Cold Storage Areas
67. Cinder Block Walls
68. Spreaders
69. Storage Tanks Exterior
70. Sewage Treatment Tanks Exterior
71. Thickener Tanks
72. Mining Equipment
73. Steel Beams
74. Pipelines Exterior
75. Propane Tanks
76. Stairwells
77. Hand Rails

RECREATIONAL
38. Camper Shells
39. Jet Ski Decks
40. Snowmobile Decks
41. Motor Home Roofs
42. Hockey Sticks
43. RV Interior Trailers
44. Utility Trailers
45. ATV Trailers
46. Boat Trailers
47. Recreational Trailers
48. Snowmobile Trailers
49. Tow Trailers
50. Semi Trailers
51. Fifth Wheel Hitches
52. Animal Trailers
53. Trailer Hitches
54. Park Benches
55. Skate Parks

COMMERCIAL
84. Wheelchair Ramps
85. Work Benches
86. Work Floors
87. Railings
88. Air Conditioning Casings
89. Car Washes
90. Van Interior
91. Trailer Interior
92. Lift Gates
93. Cargo Hold
94. Aircraft Hanger
95. Cargo Van Interior
96. Curb Ramps
97. Rail Boxcar Floors
98. Tanker Cars
99. Hopper Cars
100. Recycle Bins
101. Trash Receptacles
102. Institutional Shower Floors
103. Subwoofer Enclosures
104. Fork Lift Shells
TOUGH AND TINTABLE PROTECTIVE COATING

<table>
<thead>
<tr>
<th>GUN Tip</th>
<th>SCHUTZ GUN</th>
<th>HVLP GUN</th>
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<tr>
<td>Gun Tip</td>
<td>-</td>
<td>1.7 - 2.5 mm</td>
</tr>
<tr>
<td>Air Pressure</td>
<td>2.75 - 4.10 bar (40-60 PSI)</td>
<td>2 bar (29 PSI) or as per gun manufacturers’ recommendations</td>
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<tr>
<td>Thinners</td>
<td>-</td>
<td>Up to 20%</td>
</tr>
<tr>
<td>RAPTOR® RLB (Black)</td>
<td>Ready to use</td>
<td>Ready to use</td>
</tr>
<tr>
<td>RAPTOR® RLT (Tintable)</td>
<td>Add up to 100 ml of solvent based paint (1K or 2K), see product datasheet</td>
<td>Add up to 100 ml of solvent based paint (1K or 2K), see product datasheet</td>
</tr>
<tr>
<td>Coats</td>
<td>Maximum 2</td>
<td>Maximum 2 or 3</td>
</tr>
<tr>
<td>Flash-Off Time</td>
<td>Minimum time recommended 60 min</td>
<td>Minimum time recommended 35 min</td>
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SUBSTRATE COVERAGE PER LITRE

<table>
<thead>
<tr>
<th>Coats</th>
<th>1 Coat</th>
<th>2 Coats</th>
<th>3 Coats</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2.5 - 7.5 m² depending on the texture</td>
<td>2 - 4 m² depending on the texture</td>
<td>About 6 m²</td>
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SUBSTRATE PREPARATION AND ADDITIONAL PRODUCTS

| Bare metal, Aluminium, Coated Steel and E-coat | For localised exposed areas, use ACID#8 (ACID/AL) Etch Primer. For large exposed areas use an Epoxy Primer |
| GRP, SMC, Fibre Glass | GRIP#4 Universal Adhesion Promoter (GRIP/AL) |
| Most Soft Plastics | S2003 Plastic Primer Adhesion Promoter (S2003/AL) |
| RAPTOR® TRACTION Slip Resistant Additive | RLTR/SM 200g per RAPTOR® Coating bottle |
| Fast Acrylic Thinner | S2042/1 |
| Schutz Gun | GUN/1 |
| HVLP Gun | GUNGHV |

RAPTOR® can also be applied with a pressure pot, electrostatic spray gun and with a roller.

SUBSTRATE PREPARATION

- Apply on a 2K coating (primer, clearcoat or solid colour).
- Always clean the sanded surface with degreaser.
- Use a 2K polyurethane primer, epoxy primer or etch primer such as U-POL® ACID# 8.
- For large areas of bare metal, always use a suitable primer following manufacturer’s directions for preparation and drying.
- For neater work, spray U-POL® GRIP#4 along the masking tape before applying RAPTOR®.
- For hard to reach and prepare areas, the use of an adhesion promoter such as GRIP#4 is recommended.

APPLICATION

- Thin coat: smoother surface, dries and hardens quickly.
- Thick coat: textured surface, dries and hardens less quickly (allow sufficient drying time).
- Touch dry in less than an hour at 20°C, light dry in 2-3 days at 20°C and through dry in 5-7 days at 20°C.
- One medium coat gives a dry film thickness of approximately 230 microns. 1-litre covers 2.5-7.5 m² depending on the application mode.
- For more thickness, apply another coat after the flash-off time.
- For a smoother texture, add up to 20% thinner and use a HVLP gun.
- Once dry, RAPTOR® can be applied to itself for simple adjustments.
7 REASONS TO CHOOSE RAPTOR®

1. CUSTOMISABLE
RAPTOR® is available in black and tintable versions. The tintable version can be altered to suit the colour of your choice by adding up to 100 ml of automotive solvent paint. RAPTOR® can be applied as a smooth finish through to a very coarse finish.

2. DURABLE
Provides a tough mechanical damage and stain resistant surface. Protects against rust, corrosion and extreme temperatures.

3. U.V. RESISTANT
Stops colour fading.

4. WATER RESISTANT
Provides a water tight seal, keeping moisture out and reducing the chance of rust.

5. QUICK & EASY TO USE
Easy as Fill-Shake-Shoot. Dries quickly. Can be applied with excellent adhesion across many substrates either with Schutz Gun, HVLP Gun, roller or brush. Easy to clean.

6. RESISTANT
Resistant against fuels, hydraulic oils, animal urine, salt water and more.

7. SLIP RESISTANT ADDITIVE
The use of RAPTOR® TRACTION with RAPTOR® produces a slip resistant surface as defined by BS 7976-2.

APPLICATION ON OTHER COATINGS
- Usually, if the hardness and texture of the existing coating look like RAPTOR®, it is possible to apply RAPTOR® on top.
- Do not apply RAPTOR® on polyurea coatings.
- Applying RAPTOR® on old epoxy coatings is possible. We recommend sanding it before applying RAPTOR®.
- Thoroughly sand the existing coating and clean with degreaser.
- If the texture of the existing coating is still visible, it has not been sanded enough.

CERTIFICATIONS
- RAPTOR® has passed flammability testing for motor vehicles according to the test methods FMVSS 302, ISO 3795 & BS AU 169A.
- RAPTOR® TRACTION slip resistant additive used with RAPTOR® coating produces a slip resistant surface as defined by BS 7976-2.
FROM INDUSTRIAL TO AUTOMOTIVE REQUIREMENTS

RAPTOR® is ideal for many industrial applications such as commercial fleet protection, metal fabricating, flooring, heavy duty containers and machinery.

BENEFITS

- Tintable, customise with any colour
- Protects against rust
- U.V. resistant, stops colour fading
- Water resistant, keeps moisture out
- Slip resistant additive available
- Easy to clean
FROM INDUSTRIAL TO AUTOMOTIVE REQUIREMENTS

RESISTANCE
RAPTOR® provides reliable protection against mechanical and chemical damage in the toughest conditions.

PRODUCT RANGE

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APPLICATION GUIDE
RAPTOR® RECOMMENDED PROCEDURE

RAPTOR® is a textured coating, suitable for use over the following substrates:

- OEM Paint
- Primed Metal
- Primed Aluminium
- Primed Galvanized
- Fibre Glass / SMC
- Wood
- Concrete
- Powder Coat

Process tools required:
- RAPTOR® Kits
- Eye glasses
- Respirator
- P80-P180 grit sand paper
- Refinish pads
- U-POL® Applicator Gun: GUN/1 (unless rolling)

PRIME SURFACE
Spot prime any areas where bare metal has been exposed in Step 2. Bare metal, aluminium or galvanized surfaces must be primed with an etch primer like ACID#8, or a DTM epoxy or urethane primer in accordance with manufacturer’s recommendations.

MIX RAPTOR®
RAPTOR® has a 3:1 mix ratio. RAPTOR® bottles come pre-filled with 750 ml of RAPTOR® coating. Pour 250 ml of the RAPTOR® hardener into the bottle or combine RAPTOR® and hardener at a 3 parts RAPTOR® to 1 part hardener ratio in a separate container. For tinting, please consult our technical datasheet.

CLEAN SUBSTRATE
Remove all loose material. Clean and degrease surface. We recommend using U-POL® SYSTEM 20 degreasers (S2001/5 or S2002/5).

SAND SUBSTRATE
Sand surface with P80-P180 grit paper, use red scuff pad for difficult to sand areas. Reclean the surface. RAPTOR® can be directly applied over painted surfaces that have been cleaned and sanded.

SHAKE
Shake bottle or stir (if mixing in separate container) for 2 minutes to thoroughly mix the product.

SHOOT
Attach applicator gun to bottle. Adjust supplied air pressure to 2.75-4.1 bar depending on desired texture. At a distance of 45-150 cm, apply to the prepared surface in a sweeping motion to obtain desired texture. Pot life: approximately 60 minutes. We recommend using U-POL® Schutz Gun (GUN/1).

ADDITIONAL COATS
2 or 3 light coats are better than one heavy coat. If applying more than one coat, allow RAPTOR® to flash 60 minutes between coats. If more than 5 hours between coats, allow it to set overnight, lightly scuff and apply additional coat(s).

TOP COATING
RAPTOR® can be over painted with most modern paint systems. Allow RAPTOR® to dry for 24 hours, scuff with fine scuff pad, clean, apply top coat or clearcoat if desired. We recommend using SYSTEM 20 clearcoats (such as S2081SR).

DRY TIMES
Dry to Touch: 1 hour.
Light Duty Use: 2-3 days.
Heavy Duty Use 7 days.

EQUIPMENT CLEAN UP
Clean gun, equipment and over spray with lacquer thinner or acetone before RAPTOR® is fully cured.
RAPTOR® TRACTION - SLIP RESISTANT ADDITIVE

RAPTOR® TRACTION slip resistant additive can be added directly into RAPTOR® Tough and Tintable Protective Coating bottles prior to spraying. RAPTOR® TRACTION is packaged in a convenient 200g resealable bag and will fill one bottle of RAPTOR® for a typical slip-resistant application.

The use of RAPTOR® TRACTION with RAPTOR® produces a slip resistant surface as defined by BS 7976-2.

APPLICATIONS

- Handrail
- Bedliner
- Vehicle interior floors
- Flooring
- Running boards
- Jeep and 4x4 Tubs
- Ladder steps
- Boat, jet ski, snowmobile decks
- Cabin floors
- Ramps
- Decks and boardwalks
- Shipping containers

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U-POL®

U-POL® invests in new product development to provide our customers with continuous innovations. With over 60 year of experience, we are valued by our customers for delivering high quality service, sales support and products that enable them to maximise their profits.

Sales representatives are available to discuss your long term plans and identify new profit opportunities for you. Our Business Development Executives promote U-POL® products and create demand that is supplied through our distribution partners.
FREQUENTLY ASKED QUESTIONS

1. WHAT CAN BE USED TO TINT RAPTOR®?
   For best results, use the solvent based toners from basecoat mixing systems. RAPTOR® can also be tinted with solvent based basecoats and solvent based 2K solid colours isocyanate cured paints. For opacity, typically 5-10% colour is required and can be mixed in the bottle.

2. WHAT CAN RAPTOR® BE APPLIED OVER?
   Properly prepared steel, aluminium, wood, OEM paint, plastics, fibre glass, SMC and concrete. Please note some priming or sealing may be required. Please see product technical datasheet for more detail.

3. WHAT IS THE AIR DRYING TIME AT 20°C?
   < 1 hour touch dry, 12 hours handling, 3 days for light work, 5 to 7 days for heavy work.

4. CAN RAPTOR® BE FORCE DRIED?
   Yes, for 30 minutes at 60°C. Baking speeds up the initial cure but it is recommended to wait 5 to 7 days for heavy work.

5. APPLICATION EQUIPMENT
   Schutz gun (European thread - e.g. GUN/1) HVLP Spraygun 1.7- 2.5 (lower if reduced), roller, brush. RAPTOR® can also be applied via pressure pots and electrostatically.

6. HOW MANY COATS SHOULD I APPLY?
   Average application is 2 to 3 coats allowing 60-minute flash off between coats.

7. WHAT ARE THE MINIMUM AND MAXIMUM TEMPERATURES RAPTOR® CAN BE APPLIED?
   Min 5°C, Max 35°C.

8. WHAT TEMPERATURES IS RAPTOR® RESISTANT TO?
   Constant Minimum: -18°C.
   Maximum: + 100°C.

9. WHAT LIQUIDS IS RAPTOR® RESISTANT TO?
   Fresh and salt water, petrol, diesel, acids, animal urine (further chemical resistance data available on request). See document “ASTM D-1308” resistance to household chemicals.

10. WHAT IS THE POT LIFE ONCE RAPTOR® IS ACTIVATED?
    60 minutes at 20°C.

11. CAN I RE-APPLY RAPTOR® OVER ITSELF AT A LATER DATE?
    Yes, appropriately cleaned and abraded.

12. CAN I OVERPAINT RAPTOR®?
    Yes, once RAPTOR® is fully cured for 24-hours then appropriately cleaned and abraded, it can be overpainted as you would with a primer.

13. WHAT IS THE MIXING RATIO?
    RAPTOR® is supplied at 3:1 and can be thinned up to 20% to provide a large range of textures. Mix 750 ml of RAPTOR® with 250 ml of hardener.

14. WHAT SIZES ARE RAPTOR® SOLD IN?
    1L kit, 4L kit, 5L tin, 200L drum.

15. WHAT IS THE AVERAGE BUILD?
    As applied through a Schutz Gun at 3.5 bar:
    1 Coat 230µ (9.0 mil).
    2 Coats 475µ (18.7 mil).

16. HOW MUCH RAPTOR® WILL I NEED TO COVER A STANDARD TRUCK BED?
    1 kit. For further details on full overspray and other configurations, refer to "Indicative consumption" document on the RAPTOR® webpage.

COATING REGULATIONS

Coating regulations differ by country, industry and application. Inclusion of a specific application within this catalogue is meant to demonstrate ability of this product to perform technically in that application, but does not mean that it has regulatory approval for this use in all different legislative regimes (for example having the relevant VOC for that specific use in every market). If you need specific advice regarding the local legislative frameworks for use of RAPTOR® in any given application please contact your U-POL® representative.
17. **CAN RAPTOR® BE USED ON FIBRE GLASS?**
The surface should be scuffed with P400 grit paper and degreased before the RAPTOR® is applied. An adhesion promoter (GRIP#4) could be used for optimum adhesion.

18. **CAN RAPTOR® BE USED ON CONCRETE?**
As long as the concrete is clean, dry, and free of oil, you can apply RAPTOR® directly to concrete.

19. **CAN RAPTOR® BE APPLIED TO PLASTIC?**
RAPTOR® can be used on plastic without much preparation. The plastic should be scuffed (P220-P320), apply an adhesion promoter (GRIP#4), wait 20 minutes before applying RAPTOR®.

20. **CAN RAPTOR® BE APPLIED TO ALUMINIUM?**
Yes, abrade the surface with P120, degrease and then apply two coats of an etch primer (ACID#8). For large areas of bare aluminium, we recommend the use of an epoxy primer prior to application of RAPTOR®.

21. **CAN RAPTOR® BE APPLIED TO BARE METAL?**
Yes, large areas of bare metal must be properly prepared with an epoxy primer prior to application of RAPTOR®.

22. **CAN RAPTOR® BE USED ON WOOD AND PLYWOOD?**
RAPTOR® can be applied directly to wood providing it is clean and dry. For green wood, we would recommend sealing with a suitable wood sealer.

23. **CAN RAPTOR® BE USED OVER FERROUS CHLORIDE?**
Ferrous chloride is a salt and as such will be hygroscopic (will readily absorb moisture). Most coatings over salts may suffer from early blistering and/or corrosion of the substrate. Therefore, we would not recommend using RAPTOR® in this situation. The ferrous chloride would need to be stripped away, either chemically or mechanically, and the substrate degreased and cleaned before RAPTOR® could be applied.

24. **CAN RAPTOR® BE APPLIED ON TOP OF A BASECOAT?**
Yes, as long as the basecoat is fully cured before applying RAPTOR®.

25. **CAN RAPTOR® BE APPLIED ON TOP OF A POWDER COAT?**
Yes, RAPTOR® can be applied on top of a powder coat.

26. **CAN RAPTOR® BE APPLIED ON TOP OF A OEM E-COAT?**
Yes. No preparation is required as long as the surface is clean and dry.

27. **CAN RAPTOR® BE APPLIED ON TOP OF A 2 PART EPOXY PRIMER?**
Yes, as long as the primer is fully cured and according to manufacturers' recommendations.