



RAPTOR ADVANCED  
TECHNOLOGY COATINGS

# ***TECHNICAL MANUAL***

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**RAPTOR**<sup>®</sup>  
INDUSTRIAL

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# 1.2 RAPTOR-SPECIFIC PRODUCTS

Product Description	Product Code
<b>RAPTOR Bases</b>	
<b>RAPTOR Black</b>	RLB/S1 (1 bottle kit)
	RLB/S4 (4 bottle kit)
	RLB/5 (5L)
	RLB/200 (200L)
<b>RAPTOR Tintable</b>	RLT/S1 (1 bottle kit)
	RLT/S4 (4 bottle kit)
	RLT/5 (5L)
	RLT/200 (200L)
<b>RAPTOR White</b>	RLW/S4 (4 bottle kit)
	RLW/200 (200L)
<b>RAPTOR Hardeners</b>	
<b>RAPTOR Hardener</b>	RLH/5 (5L)
<b>Guns and RAPTOR Brand Ancillary Products</b>	
<b>RAPTOR Anti-Corrosive Epoxy Primer Gray</b>	Sold as kit only REP/1LK (1L kit) REP5LK (5L kit)
<b>RAPTOR Anti-Corrosive Epoxy Primer Hardener</b>	
<b>RAPTOR 2K Beige Epoxy Aerosol</b>	REP/AL
<b>RAPTOR Acid Etch Primer Aerosol</b>	RPTEP/AL
<b>RAPTOR Adhesion Promoter Aerosol</b>	RPTAP/AL
<b>RAPTOR Traction Anti-Slip Additive</b>	RLTRC/SM
<b>RAPTOR Roller and Tray Kit</b>	ROLLERPACK
<b>RAPTOR Schutz gun</b>	GUN/1
<b>RAPTOR Vari-Gun</b>	GUN/VN
<b>HVLP Gravity Spray Gun 1.3mm Tip</b>	GUNGHV/13
<b>HVLP Gravity Spray Gun 1.4mm Tip</b>	GUNGHV/14
<b>HVLP Gravity Spray Gun 1.7mm Tip</b>	GUNGHV/17
<b>HVLP Gravity Spray Gun 2.0mm Tip</b>	GUNGHV/20
<b>RAPTOR 2K Aerosols</b>	
<b>RAPTOR Black</b>	RLB/AL

# 1.3 NON-RAPTOR SUPPLEMENTARY PRODUCTS

Product Description	Product Code
System 20 Fast Thinner/Reducer	S2044/1 (1L) S2044/5 (5L)
System 20 Standard Thinner/Reducer	S2045/1 (1L) S2045/5 (5L)
System 20 Slow Thinner/Reducer	S2046/1 (1L) S2046/5 (5L)
System 20 Waterbased Degreaser	S2000/5 (5L)
System 20 Fast Solventbased Degreaser	S2001/5 (5L) S2001/25 (25L)
System 20 Slow Solventbased Degreaser	S2002/1 (1L) S2002/5 (5L)
Wipe #6 Degreaser Aerosol	WIPE/AL
Acid #8 Acid Etch Primer	ACID/1 (1L)
Acid #8 Acid Etch Primer Aerosol Gray	ACID/AL
Acid #8 Acid Etch Primer Aerosol Black	Not available
Grip #4 Adhesion Promoter Aerosol	GRIP/AL
System 20 S2003 Plastic Primer	S2003/1 (1L)
U-POL Barcoat	BAR/1 (1L)
Tigerseal Black Sealant	TIG/NB (Cartridge)
Tigerseal Gray Sealant	TIG/GG (Cartridge)
Tigerseal White Sealant	TIG/BW (Cartridge)
P60 Grit Maximum Abrasive Discs	ABD7/VP60
P120 Grit Maximum Abrasive Discs	ABD7/VP120
P150 Grit Maximum Abrasive Discs	ABD7/VP150
P180 Grit Maximum Abrasive Discs	ABD7/VP180
P240 Grit Maximum Abrasive Discs	ABD7/VP240
P320 Grit Maximum Abrasive Discs	ABD7/VP320
P400 Grit Maximum Abrasive Discs	ABD7/VP400
P500 Grit Maximum Abrasive Discs	ABD7/VP500
P800 Grit Maximum Abrasive Discs	ABD7/VP600
P800 Grit Maximum Abrasive Discs	ABD7/VP800
P1000 Grit Maximum Abrasive Discs	ABD7/VP1000
P1200 Grit Maximum Abrasive Discs	ABD7/VP1200
P1500 Grit Maximum Abrasive Discs	ABD7/VP1500
P2000 Grit Maximum Abrasive Discs	ABD7/VP2000
Maximum Premium Mask (FFP2 and NIOSH N95)	RESPV
Maximum Painters Overalls Medium	COVER/M (10 pcs)
Maximum Painters Overalls Large	COVER/L (10 pcs)
Maximum Painters Overalls XL	COVER/XL(10 pcs)
Maximum Painters Overalls XXL	COVER/XXL (10 pcs)
Maximum Painters Overalls XXXL	COVER/XXXL (10 pcs)

Continued →

<b>Product Description</b>	<b>Product Code</b>
<b>Maximum Masking Film 4m x 150m</b>	MFILM/B150
<b>Maximum Masking Film 5m x 120m</b>	MFILM/B120
<b>Maximum Masking Film 5pcs</b>	MFILMCUT
<b>Maximum Finishing Pad Gray</b>	APAD/G10 (10pcs) APADR/G35 (Roll)
<b>Maximum Finishing Pad Red</b>	APAD/R10 (10pcs) APADR/R35 (Roll)
<b>Maximum Tack Cloth</b>	TRAG/10 (10 pcs)
	TRAG/50 (50 pcs)
<b>Maximum Solvent Wipes</b>	MWPP/350

## 2. SUBSTRATE PREPARATION

### 2.1 MILD STEEL

1. Ensure that substrate is clean, dry and free of rust. This may include preparation by chemical pre-treatment or shot blasting.
2. Fill any blemishes with a polyester filler and finish in accord with manufacturer instructions.
3. Abrade steel with 80-180 grit paper.
4. Clean and degrease with panel wipe followed by a tack cloth.
5. Mask off all areas where you do not wish to apply U-POL RAPTOR.
6. Apply primers/RAPTOR as described in Sections 3 and 4.

### 2.2 ALUMINIUM

1. Ensure that substrate is clean and dry. This may include preparation by chemical pre-treatment or shot blasting.
2. Clean the surface with a metal cleaner suitable for use on this substrate or methylated spirits. Use two white cloths with the metal cleaner, with a wipe on wipe off method until the blackness disappears.
3. Fill any blemishes with a polyester filler and finish in accord with manufacturers instructions.
4. Abrade aluminium with 180 grit paper.
5. Clean and degrease with panel wipe followed by a tack cloth.
6. Mask off all areas where you do not wish to apply U-POL RAPTOR.
7. Apply primers/RAPTOR as described in Sections 3 and 4.

### 2.3 GALVANISED STEEL

1. Ensure that substrate is clean and dry. This may include preparation by chemical pre-treatment or shot blasting.
2. Fill any blemishes with a polyester filler and finish in accord with manufacturers instructions.
3. Abrade galvanised steel with 180 grit paper.
4. Clean and degrease with panel wipe followed by a tack cloth.
5. Mask off all areas where you do not wish to apply U-POL RAPTOR.
6. Apply primers/RAPTOR as described in Sections 3 and 4.

## 2.4 STAINLESS STEEL

1. Ensure that substrate is clean, dry and free of rust. This may include preparation by chemical pre-treatment or shot blasting.
2. Clean the surface with a metal cleaner or methylated spirits. Use two white cloths with the metal cleaner, with a wipe on wipe off method till the blackness disappears.
3. Fill any blemishes with a polyester filler and finish in accord with manufacturers instructions.
4. Abrade stainless steel with 80-180 grit paper.
5. Clean and degrease with panel wipe followed by a tack cloth.
6. Mask off all areas where you do not wish to apply U-POL RAPTOR.
7. Apply primers/RAPTOR as described in Sections 3 and 4.

## 2.5 ORIGINAL EQUIPMENT MANUFACTURER PAINT

1. Ensure that substrate is clean and dry.
2. Abrade OEM paint with 180 grit paper.
3. Clean and degrease with panel wipe followed by a tack cloth.
4. Mask off all areas where you do not wish to apply U-POL RAPTOR.
5. Apply RAPTOR as described in Section 4.

## 2.6 PAINT

1. Ensure that substrate is clean and dry.
2. Abrade paint with 180 grit paper.
3. Confirm that the paint is sound and solvent resistant. This may be done by rubbing solvent on a small area and checking for Colour rubbing off.
4. Clean and degrease with panel wipe followed by a tack cloth.
5. Mask off all areas where you do not wish to apply U-POL RAPTOR.
6. If the paint is not solvent resistant use a barrier paint (U-POL Barcoat) as described in Section 3.
7. Apply primers/RAPTOR as described in Sections 3 and 4.

## 2.7 SEALANT (U-POL TIGERSEAL)

1. If there is existing sealant this should be removed before application.
2. Ensure that surrounding substrate is clean and dry.
3. Abrade substrate with 180 grit paper.
4. Clean and degrease with panel wipe followed by a tack cloth.
5. Apply sealant (U-POL Tigerseal) as described in Section 3
6. Mask off all areas where you do not wish to apply U-POL RAPTOR.
7. Apply RAPTOR as described in Section 4, observing sealant overcoating time of 30mins to 1hr. Do not use epoxy primer or acid etch primer over sealant.



## 2.8 RIGID PLASTICS (ABS, SMC)

1. Ensure that substrate is clean and dry. Remove any loose, flaking or unstable material.
2. Abrade surface with 120-180 grit paper.
3. Wipe down with panel wipe followed by a tack cloth.
4. Mask off all areas where you do not wish to apply U-POL RAPTOR.
5. Apply RAPTOR as described in Section 4.

## 2.9 FLEXIBLE PLASTICS (TPO, EPDM, PP)

1. Ensure that substrate is clean and dry. Remove any loose, flaking or unstable material.
2. Abrade surface with 120-180 grit paper.
3. Wipe down with panel wipe followed by a tack cloth.
4. Mask off all areas where you do not wish to apply U-POL RAPTOR.
5. Apply one coat of adhesion promoter / plastic primer as described in Section 3.
6. Apply RAPTOR as described in Section 4.

## 2.10 WOOD (VARIOUS)

1. Ensure that substrate is clean and dry. Remove any loose, flaking or unstable material.
2. Remove and stabilize any rotten wood.
3. Fill any blemishes with a polyester woodfiller and finish in accord with manufacturers instructions.
4. Abrade MDF with a fine abrasive pad. Abrade other types of wood with 120-150 grit paper.
5. Blow dust away using compressed air, wipe with a damp cloth and allow to completely dry.
6. Mask off all areas where you do not wish to apply U-POL RAPTOR.
7. Apply primers/RAPTOR as described in Sections 3 and 4.

## 2.11 FIBREGLASS / GRP

1. Ensure that substrate is clean and dry. Remove any loose, flaking or unstable material.
2. Abrade surface with 120-180 grit paper.
3. Wipe down with panel wipe followed by a tack cloth.
4. Mask off all areas where you do not wish to apply U-POL RAPTOR.
5. Apply primers/RAPTOR as described in Sections 3 and 4.

## 2.12 POLYESTER FILLERS / SMC

1. Ensure that substrate is clean and dry. Remove any loose, flaking or unstable material.
2. Abrade surface with 80-180 grit paper.
3. Wipe down with panel wipe followed by a tack cloth.
4. Mask off all areas where you do not wish to apply U-POL RAPTOR.
5. Apply primers/RAPTOR as described in Sections 3 and 4.



## 3 PREPARTORY PRODUCT APPLICATION

The methods detailed below are general guides for how to apply U-POL's preparatory product range.

### 3.1 RAPTOR ANTI-CORROSIVE EPOXY PRIMER

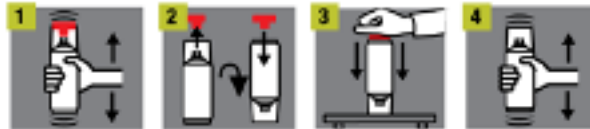
1. Ensure that substrate is clean and dry. Remove any loose, flaking or unstable material. Do not apply over acid etch primer.
2. Sufficient abrasion / blasting may be required to ensure full adhesion, especially if corrosion is present on surface.
3. For light corrosion mechanical hand preparation (e.g. SSPC-SP2 (SSI-St3)) or mechanical powertool preparation (e.g. SSPC-SP3 (SSI-St3)) may be sufficient. 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.
4. Abrade surface with 80-240 grit paper and prepare in accordance with guidance in Section 2.
5. Wipe down with panel wipe followed by a tack cloth.
6. Mask off all areas where you do not wish to apply U-POL RAPTOR Anti-Corrosive Epoxy Primer.
7. Mix RAPTOR Anti-Corrosive Epoxy Primer 4:1 by volume and apply using either a roller or a HVLP spray gun with 1.4 to 1.9mm fluid tip.
8. Apply 2 – 3 coats, leaving 10 mins flash off between coats.
9. RAPTOR may be used to overcoat RAPTOR Anti-Corrosive Epoxy Primer from 1 hour to 7 days after application without abrasion. After 7 days the surface must be abraded before overcoating.

## 3.2 RAPTOR 2K BEIGE EPOXY AEROSOL

1. Ensure that substrate is clean and dry. Remove any loose, flaking or unstable material.  
**Do not apply over acid etch primer.**
2. Abrade surface with 80-180 grit paper and prepare in accordance with guidance in Section 2.
3. Wipe down with panel wipe followed by a tack cloth.
4. Mask off all areas where you do not wish to apply U-POL RAPTOR 2K Beige Epoxy Aerosol.



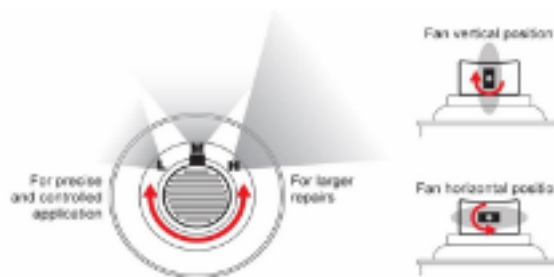
### Mixing and Activation



5. Shake can for two minutes before activation.
6. Remove the button from under the instruction leaflet on the cap. Turn the can upside down and fit the button onto the pin in the base of the can.
7. With the cap still on, place the can on a firm surface. Push the button all the way down with the palm of your hand to release the activator into the aerosol. Check the aerosol is activated by confirming push button can be pushed in with minimal resistance.
8. Shake can for two minutes before use. Pot life is 4 days after activation at 20°C (68°F)



### Application



9. The horizontal and vertical spray direction of the nozzle on the aerosol can be adjusted to suit the size of the repair.
10. Turn the nozzle to the right for larger repairs and to the left for smaller, precise areas.
11. Paint a minimum of 2 coats at 30cm from the surface, allowing a 5 minute flash off between coats.
12. RAPTOR 2K Beige Epoxy Aerosol can be overcoated after 30 minutes. After 24 hours the primer should be abraded with P400 sandpaper before overcoating.

### **3.3 RAPTOR ACID ETCH PRIMER AEROSOL AND ACID #8 ACID ETCH PRIMER AEROSOL**

1. It is recommended that acid etch primer is used for small areas / rub throughs (approximately the size of a large coin). Larger areas should be painted with RAPTOR Anti-Corrosive Epoxy Primer or RAPTOR 2K Beige Epoxy Aerosol.
2. Ensure that substrate is clean and dry. Remove any loose, flaking or unstable material.
3. Abrade surface with 180-240 grit paper and prepare in accordance with guidance in Section 2.
4. Wipe down with panel wipe followed by a tack cloth.
5. Mask off all areas where you do not wish to apply acid etch primer aerosol.
6. Shake can for at least 2 minutes before use.
7. Spray 1 – 2 coats at a distance of 25cm (10 inches), allowing 3 – 5 minutes flash between them.
8. Acid etch primer can be overcoated with RAPTOR from 10 – 20 minutes after application.

### **3.4 ACID #8 ACID ETCH PRIMER**

1. It is recommended that acid etch primer is used for small areas / rub throughs (approximately the size of a large coin). Larger areas should be painted with RAPTOR Anti-Corrosive Epoxy Primer or RAPTOR 2K Beige Epoxy Aerosol.
2. Ensure that substrate is clean and dry. Remove any loose, flaking or unstable material.
3. Abrade surface with 180-240 grit paper and prepare in accordance with guidance in Section 2.
4. Wipe down with panel wipe followed by a tack cloth.
5. Mask off all areas where you do not wish to apply Acid #8 Acid Etch Primer.
6. Apply 1 – 2 coats using a HVLP gun with 1.2 to 1.3mm fluid tip, allowing 3 – 5 minutes flash off between coats.
7. Acid etch primer can be overcoated with RAPTOR from 10 – 20 minutes after application.

### **3.5 RAPTOR ADHESION PROMOTER AEROSOL AND GRIP #4 ADHESION PROMOTER AEROSOL**

1. Ensure that substrate is clean and dry. Remove any loose, flaking or unstable material.
2. Where abrasion is possible prepare in accordance with guidance in Section 2. Adhesion promoter aerosol will also help adhesion in hard to reach places.
3. Wipe down with panel wipe followed by a tack cloth.
4. Shake can for at least 2 minutes before use.
5. Spray 1 – 2 coats at a distance of 25cm (10 inches), allowing 10 minutes flash between them.
6. RAPTOR can be used to overcoat adhesion promoter aerosol 20 minutes after application.

## 3.6 SYSTEM 20 S2003 PLASTIC PRIMER

1. Ensure that substrate is clean and dry. Remove any loose, flaking or unstable material.
2. Abrade surface with P240 – P320 grit paper and prepare in accordance with guidance in Section 2.
3. Wipe down with a suitable plastic panel wipe followed by a tack cloth.
4. Shake can thoroughly before use.
5. Use a HVLP gravity gun with 1.0 to 1.2mm fluid tip to apply 1-2 light even coats. Allow 5-10 minutes flash off time between coats.
6. Overcoat System 20 S2003 Plastic Primer within 1 hour of application.

## 3.7 U-POL BARCOAT

1. U-POL Barcoat should be used as an isolator over solvent sensitive surfaces. It should not be applied over bare metal.
2. Ensure that substrate is clean and dry.
3. Abrade surface with P400 grit paper for original paint and P180 for GRP, SMC, glass fibre and polyester filler. Prepare in accordance with guidance in Section 2.
4. Wipe down with panel wipe followed by a tack cloth.
5. Mask off all areas where you do not wish to apply U-POL Barcoat.
6. Use a HVLP gravity gun with 1.3 to 1.4mm fluid tip to apply 1 coat.
7. U-POL Barcoat can be overpainted with a suitable primer / surfacer 1 hour after application.
8. The primer should be overcoated with RAPTOR in accordance with product TDS and following manufacturer instructions.

## 3.8 U-POL TIGERSEAL

1. Ensure that substrate is clean and dry.
2. Wipe down with panel wipe followed by a tack cloth.
3. Apply with a standard cartridge caulking gun or pneumatic version at approximately 6 Bar (87 psi).
4. U-POL Tigerseal may be overcoated with 2K polyurethane paints such as RAPTOR when it has skinned (30 mins at 20°C (68°F) and 50% relative humidity).
5. Other paints may be applied once fully cured (cures from outside at a rate of 3mm per 24 hours). Do not use epoxy primer or acid etch primer over sealant.

## 4. PRODUCT USE INSTRUCTIONS

### 4.1 ACTIVATION INSTRUCTIONS

#### Mixing cans and drums

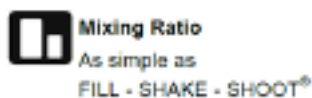
RAPTOR is activated in a 3:1 ratio by volume with its hardener. Optionally thinners / reducers may be added but this is generally recommended only for an application with an atomising spraygun where a flatter finish is desired (this shall be referred to as an HVLP Application). Thinning for this purpose is between 15 and 20%.

#### Mixing bottles

RAPTOR is supplied as a kit of either 1 or 4 bottles containing 24 US fl. Oz. of RAPTOR paint, to each be mixed with 8 US fl. Oz of hardener (supplied). A measuring cup is also supplied to allow accurate measuring of hardener. The bottles of RAPTOR have sufficient ullage in the bottle to allow the measured hardener to be poured in. The cap is then replaced and the bottle shaken for 2 minutes to mix before a gun is attached / RAPTOR is transferred to gun container. The RAPTOR is then sprayed as user requires. This can be summarised as Fill – Shake – Shoot.

Generally 2 coats of RAPTOR should be applied, leaving a 60 minute flash off between coats. 1 medium coat will be approximately 275µm wet film thickness. Different textures and finishes are achieved by varying gun pressures, distance from substrate, speed of passes and thinning. Below are more detailed instructions about how to use RAPTOR.

#### Mixing by Volume



Product Description	SCHUTZ Gun / Roller	HVLP Gravity Gun
<b>RAPTOR : Hardener</b>	<b>3:1</b>	<b>3:1</b>
<b>U-POL SYSTEM 20 Fast Thinners /Reducers</b>	Ready to use, no thinner/reducer needed	Up to 15-20% maximum to reduce the texture. About 25% more coverage*  *Addition of thinner/reducer will affect the product VOC.

## Mixing by Weight

For Schutz Gun / Roller Application

Volume mixed / ml	Base / g	Hardener / g	Total / g
250	210	60	270
500	420	121	541
1000	840	241	1081

For HVLP Application (15% S2044/UP2441)

Volume mixed / ml	Base / g	Hardener / g	Reducer / g	Total / g
250	183	52	29	264
500	365	105	58	528
1000	730	210	116	1056

For HVLP Application (20% S2044/UP2441)

Volume mixed / ml	Base / g	Hardener / g	Reducer / g	Total / g
250	175	50	37	262
500	350	101	74	525
1000	700	201	148	1049

Also available for RAPTOR are 2K aerosols (several Colours and an epoxy primer). Activation instructions below in relevant section.

## 4.2 TINTING

Tintable RAPTOR is also available and can be tinted with most solvent based systems.

### It can be tinted in three ways;

- Using the toners from a solventbased tinting system. Add up to 10% by volume. As toners have high strength in most cases up to 5% is enough.
- A solventbased automotive basecoat (10% by volume). If possible leave out the basecoat binder.
- A 2K solid Colour paint which is isocyanate cured. Activate this with its own hardener and activate RAPTOR with its own hardener then mix the two together. Only activate what you intend to use within an hour.

Specialty finishes, for example metallics or pearls, can be used to tint RAPTOR, but due to the nature of RAPTOR they do not usually give the same effect as they would in a flat finish coating. The rheology of RAPTOR prevents the pigments from laying correctly to produce a metallic or pearlescent effect, but there will be shiny speckles visible.

Do not use any waterbased materials to tint RAPTOR. Water will react with the hardener, causing bubbles and foaming, and reducing the effectiveness of the cure.

Always check the Colour before spraying. For larger jobs and better Colour accuracy it may be preferable to tint the RAPTOR as a single batch. If the Colour does not match as well as you expect, RAPTOR can be overpainted with the correct Colour basecoat. Follow overpainting instructions for RAPTOR (Section 4.9) and apply the topcoat TDS as per manufacturer instructions.

U-POL also offers Colour pouches in a variety of Colours which can be added (1 per RAPTOR bottle) to give selected RAL Colours. This is available in the North American market.

In some markets made to order (factory pack) Colours are available for industrial customers, **please see your local U-POL representative for details.**



## 4.3 SCHUTZ GUN APPLICATION

### Standard Schutz Application

1. Remove cap from RAPTOR bottle with the mixed RAPTOR.
2. Attach the RAPTOR bottle to the U-POL Schutz gun.
3. Adjust the air pressure to 2.75 - 4.10 bar (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 at 20°C (68°F).

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

### How to achieve common textures with a U-POL Schutz Gun:

**1. Standard texture through Schutz Gun:**

- 4 Bar (60 PSI)
- Distance from object 50cm (18")
- 2 coats with an even sweeping motion



**2. Coarse texture through Schutz Gun:**

- Mix RAPTOR and allow to stand for 10-minutes
- 3 Bar (45 PSI)
- Distance from object 50cm (18")
- 2 coats - 1 even sweeping motion, 2nd dropping the coat over the first



### 4.3.1 SCHUTZ APPLICATION BUILD AND COVERAGE

U-POL recommends applying 2 medium coats of RAPTOR.

**Theoretical Coverage (2 medium coats): 3 m<sup>2</sup>/L (122 sq ft/ US gal)**

**Build / microns 1 Coat: 230µ (9.0 Mils) 2 Coats: 475µ (18.7 Mils)**

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](http://www.u-pol.com).

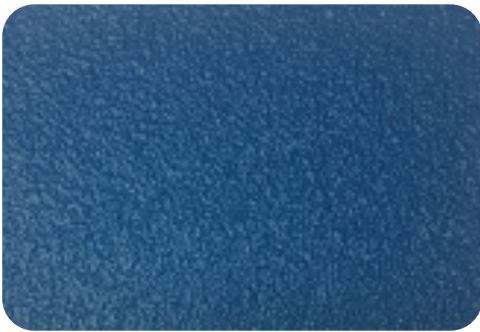
## 4.4 VARI-GUN APPLICATION

### Standard Vari-Gun Application

1. Remove cap from RAPTOR bottle with the mixed RAPTOR.
2. Attach the RAPTOR bottle to the U-POL Vari-Nozzle Gun.
3. Adjust the air pressure to 2.75 - 4.10 bar (40-60 PSI).
4. Wind the adjustable spray nozzle to the desired material flow setting and lock with the locking nut.
5. Apply to the prepared surface with an even sweeping motion to obtain the desired texture.
6. If applying additional coats allow to flash off for 60 minutes between coats at 20°C (68°F).

Turning the nozzle a various number of turns will alter the material flow and allow finer control of the final texture of the coating, as shown below:

**2 turns (lowest material flow)**



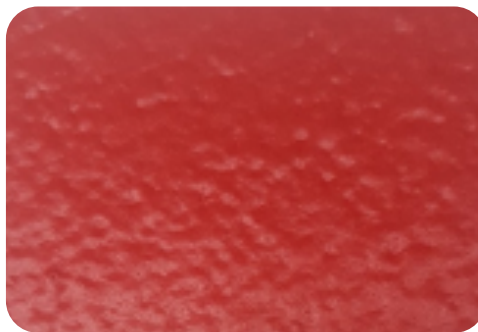
**4 turns**



**6 turns**



**8 turns (highest material flow)**



## 4.5 HVLP APPLICATION

### Standard HVLP Application

1. Remove cap from RAPTOR bottle with the mixed RAPTOR.
2. Pour the activated RAPTOR into the paint cup of the HVLP gun with a fluid tip of 1.6 – 2.0mm.
3. Adjust the air pressure to 2 bar (29 PSI).
4. Apply to the prepared surface with an even sweeping motion, allowing overlap of passes, to obtain the desired texture.
5. If applying additional coats allow to flash off for 10 minutes between coats at 20°C (68°F).

### How to achieve common textures with a U-POL Schutz Gun:

1. Fine texture through HVLP gravity fed gun, 1.6-2.0mm
  - Add 15% reducer
  - 2 Bar (29 PSI)
  - Distance from object 20cm (>8-10")
  - 1st coat even wet coat, second coat reduce pressure and material flow to achieve a fine mist
2. Standard texture through HVLP gravity fed gun, 1.6-2.0mm
  - Add 15% reducer
  - 2 Bar (29 PSI)
  - Distance from object 20cm (>8-10")
  - 1st and second coats applied as even wet coats

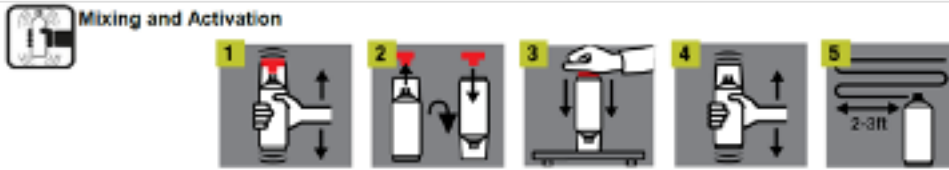


The above recommendations are based on our experience with RAPTOR and represent only a few examples of the types of textures that can be achieved. It is recommended that a trial application is made to fine tune the finish before applying onto the finished object.

## 4.6 ROLLER APPLICATION

1. Pour mixed RAPTOR into a suitable paint tray.
2. Cut in all corners and hard to reach areas with a fine synthetic brush.
3. Apply using a rough textured roller.
4. Load roller with the product and apply slowly using medium pressure.
5. Rolling on RAPTOR results in a lower build. Additional coats will be necessary. When applying additional coats, observe 60 minute flash off period between coats.

## 4.7 AEROSOL APPLICATION



1. Shake can for two minutes before activation.
2. Remove the button from under the instruction leaflet on the cap. Turn the can upside down and fit the button onto the pin in the base of the can.
3. With the cap still on, place the can on a firm surface. Push the button all the way down with the palm of your hand to release the activator into the aerosol. Check the aerosol is activated by confirming push button can be pushed in with minimal resistance.
4. Shake can for two minutes before use. Once activated, the pot life is approximately 60 minutes. Discard remaining product after 60 minutes.

### How to create common textures

#### Flat, rippled texture:

- 1 Apply a heavy coat from a distance of 1 meter, moving slowly across the panel with a steady, even motion, overlapping each pass to create a continuous film.
- 2 Turn can upside down and spray to clear the valve.
- 3 After 20 minutes at 20°C (68°F), apply a second coat just like the first.
- 4 Turn can upside down and spray to clear the valve.



**TIP: Be careful that the application is not too heavy or heavy build around edges may occur.**

#### Coarse ripple texture:

- 1 Apply a heavy coat from a distance of 1 meter, moving slowly across the panel with a steady, even motion, overlapping each pass to create a continuous film.
- 2 Turn can upside down and spray to clear the valve.
- 3 After 20 minutes at 20°C (68°F), apply a lighter second coat at a greater distance away moving faster across the panel.
- 4 Turn can upside down and spray to clear the valve.



**Smooth fine silky texture:**

- 1 Apply a light coat from a distance of 1 meter moving quickly across the panel.
- 2 Turn can upside down and spray to clear the valve.
- 3 After 20 minutes at 20°C (68°F), apply a second coat just like the first.
- 4 Turn can upside down and spray to clear the valve.



**Matte rough texture:**

- 1 Apply a continuous light drop coat from a distance of 1 metre until opacity is achieved
- 2 Turn can upside down and spray to clear the valve.
- 3 After 20 minutes at 20°C (68°F), apply a second very light coat from a greater distance to even out the texture.
- 4 Turn can upside down and spray to clear the valve.



**TIP: If the finish looks patchy a subsequent coat can be applied to blend in the finish.**

## 4.7.1 AEROSOL APPLICATION BUILD AND COVERAGE

U-POL recommends a minimum of 2 coats at 2-3 ft from the surface.

<b>Build (2 coats)</b>	<b>200µ (7.9 mil)</b>
<b>Theoretical Coverage approx.</b>	<b>1.3m<sup>2</sup> (10.8 sq ft) per can</b>

All measurements are approximate and are dependent on the application method and texture achieved.

## 4.8 RAPTOR TRACTION APPLICATION

By following this process, a low risk of slipping surface as defined by ASTM E303 and BS 7976-2 can be achieved. It is recommended that the slip resistance is monitored periodically to maintain optimal performance.

1. Prepare substrate for coating. See Section 2 for a variety of substrate preparation instructions.
2. NOTE: Anti-skid can be achieved using a number of application methods; either include Traction additive into all coats or as the final coat.
3. Mix U-POL RAPTOR 3:1 with U-POL RAPTOR Hardener. Mixing can be carried out in the bottle or alternatively in a suitable graduated mixing cup. Only activate sufficient U-POL RAPTOR that can be sprayed within 60-minutes. The pot life of U-POL RAPTOR is 60-minutes.
4. Where tinting is required add up to 10% of solvent based tinter and mix thoroughly. (For best Colour matching add the Colour by weight per bottle or pour the activated U-POL RAPTOR into a mixing vessel and add the Colour into the bulk).
5. Pour the activated U-POL RAPTOR into a suitable container and add 200g of Traction additive per activated liter and mix thoroughly.
6. For Schutz gun application pour the activated U-POL RAPTOR with the Traction additive back into the empty U-POL RAPTOR bottle and attach to the spray gun (GUN/1 or UP0726). Agitate the bottle periodically to prevent the additive from settling.  
Note:- Traction additive is not suitable for use through the RAPTOR Professional Vari-Nozzle Application Gun.
7. For roller application use a roller suitable for roughcast applications and apply 2-3 coats allowing 45-minutes minimum flash off time per coat.

## 4.9 CURING RAPTOR

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

### For gun application:

Touch Dry @ 20°C (68°F)	Less than 1 hour
Light Duty @ 20°C (68°F)	2-3 days
Through Dry @ 20°C (68°F)	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-hrs.

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.

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

I.R. curing is not recommended.

### For aerosol application:

Handling time @ 20°C (68°F)	<60 minutes
Through Dry @ 20°C (68°F)	5-7 days

Topcoat after 6 hrs. If topcoating after 24-hrs then the surface should be lightly scuffed and degreased first.

## 4.10 OVERCOATING RAPTOR

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

1. RAPTOR 2K Protective Coating Aerosol may be directly overcoated after 6 hours. Otherwise let newly sprayed RAPTOR dry for 24 hours. Old RAPTOR can be abraded immediately.
2. Abrade with a fine abrasive pad.
3. Clean and degrease.



## 5. PAINTING CONSIDERATIONS

### 5.1 COMPATIBILITIES

It is recommended that RAPTOR is used with its own primer and other recommended U-POL products to ensure full compatibility.

When painting, material compatibilities must be checked and appropriate measures observed.

Some known incompatibilities:

Epoxy primer should not be applied over acid etch primer because this causes adhesion failure.

Extreme care should be taken if applying a RAPTOR topcoat over a 1K primer, as the solvents within RAPTOR may dissolve the primer – this causes wrinkling / cracking / adhesion issues. It is recommended to sand the paint back to solid substrate before application. Alternatively U-POL Barcoat may be used to isolate the solvent sensitive paint before primer application and subsequent RAPTOR application.

However RAPTOR can be painted over acid etch primer on small areas and rub throughs. For larger areas the use of epoxy primer is recommended.

Some plastics contain mould release agents which can leach out and cause adhesion issues. On occasion it may be possible to avoid such adhesion issues by baking for 30 mins at 50°C (122°F).

Isocyanate hardeners should not be allowed to come into contact with moisture because they will react – this could lead to gelling if reacting in the tin or could lead to bubbling if reacting in the mixed paint.

### 5.2 SUBSTRATES AND PREPARATION

One of the main determinants of the quality of a painting job is the substrate preparation. Good preparation appropriate to the substrate ensures that the paint can adhere mechanically and chemically, which in turn provides improved protection and performance.

Specific guidelines for different substrates are in Section 2 of this guide, but general guidance on preparation for painting most substrates with RAPTOR are listed below:

- Ensure substrate is a sound surface with all loose material (e.g. rotten wood, loose rust) removed
- Clean and degrease / chemically pre-treat substrate to remove any contaminants
- Abrade using required abrasive grit or by shot blasting.
- Clean and degrease to remove dust and contaminants
- Using compressed air, blow away any dust and use a tack cloth to clean up any residual dust
- Allow surface to fully dry
- Optionally apply a primer / adhesion promoter, depending on substrate
- Apply RAPTOR, observing overcoating guidelines from primer / adhesion promoter TDS

If there are contaminants they can cause the coating above to exhibit faults such as cratering, or could cause adhesion issues as the coating would adhere to the contaminant rather than the substrate.

## 5.3 EFFECTS OF CLIMACTIC CONDITIONS

Painting and the finish of a paint is affected by several factors. RAPTOR will cure optimally between the temperatures of 18°C and 20°C (64°F – 68°F) and at a humidity between 40 and 60%. Acceptable application conditions are 10°C – 35°C (50°F – 95°F) and 0 – 80% relative humidity.

At lower temperatures cure of 2K paints and evaporation of solvents is slowed. Below 10°C (50°F) curing isocyanates is not recommended due to lower level of crosslinking causing softness, worse chemical and weathering resistance. Above 35°C (95°F) RAPTOR will cure too quickly in the pot, causing poor application and gelling.

Above 80% relative humidity, moisture may start to cause water spotting.

RAPTOR should be allowed to cure for at least 3 days before being exposed to weathering. The coating is still in an early stage of curing so exposure to rain can cause water spotting.

## 5.4 FAULTS AND THEIR CAUSES

### 5.4.1 ADHESION ISSUES

**Possible causes:** Applying over incompatible substrate (e.g. PE, chrome), applying primer over incompatible substrate (e.g. epoxy over acid etch), incorrect or inadequate substrate preparation, application to contaminated surfaces, applying RAPTOR too thick, incorrect activation with hardener (including not activating 2K basecoats when tinting).

**Preventative measures:** Apply all products according to TDS, follow substrate preparation instructions and ensure surface is sound and clean, apply RAPTOR according to TDS, observing pressures, distances and flash off times, mix the correct amount of RAPTOR hardener and mix thoroughly, ensure any 2K tints are correctly activated with their own hardener before addition to RAPTOR Tintable.

### 5.4.2 SHRINKING / FLAKING OFF SHARP EDGES

**Possible Causes:** Applying RAPTOR too thick or painting next coat too quickly when painting into corners.

**Preventative measures:** Apply RAPTOR according to TDS, observing pressures, distances and flash off times, take care not to overapply into corners.

### 5.4.3 SOFTNESS / NOT CURING

**Possible causes:** Applying RAPTOR too thick, painting next coat too quickly, incorrect activation with hardener (including not activating 2K basecoats when tinting).

**Preventative measures:** Apply RAPTOR according to TDS, observing pressures, distances and flash off times, mix the correct amount of RAPTOR hardener and mix thoroughly, ensure any 2K tints are correctly activated with their own hardener before addition to RAPTOR Tintable.

## 5.4.4 WATER SPOTTING / BLUSHING

**Possible causes:** Applying RAPTOR too thick, painting next coat too quickly, incorrect activation with hardener (including not activating 2K basecoats when tinting), allowing RAPTOR to get wet before 3 days cure.

**Preventative measures:** Apply RAPTOR according to TDS, observing pressures, distances and flash off times, mix the correct amount of RAPTOR hardener and mix thoroughly, ensure any 2K tints are correctly activated with their own hardener before addition to RAPTOR Tintable, allow RAPTOR to cure for the correct amount of time before exposure to weathering.

## 5.4.5 SWELLING UNDERNEATH RAPTOR

**Possible Causes:** Applying RAPTOR over solvent sensitive material, especially if applied too thick.

**Preventative measures:** Test possibly solvent sensitive surfaces and if necessary apply U-POL Barcoat as a barrier, apply RAPTOR according to TDS, observing pressures and distances.

## 5.4.6 RUSTING

**Possible Causes:** Not fully removing rust from substrate, not applying a closed coat.

**Preventative measures:** Fully remove rust from substrate e.g. by shot blasting, apply RAPTOR according to TDS, observing pressures, distances and flash off times and ensuring a closed coat is achieved.

## 5.4.7 FOAMING

**Possible causes:** Water contamination including by addition of water based tinters.

**Preventative measures:** Store all materials in a clean dry area with lids firmly closed especially the hardener, do not allow water to come into contact with materials, do not tint with a waterbased tint.

## 5.4.8 INCORRECT TINTING COLOUR

**Possible causes:** Colour tint not mixed properly, 2K Colour tint not activated properly, insufficient tint amount / strength.

**Preventative measures:** Ensure complete dispersion of Colour tint in RAPTOR Tintable, ensure any 2K tints are correctly activated with their own hardener before addition to RAPTOR Tintable, check Colour to ensure enough tint has been added before application, especially for light Colours such as yellow or orange.

## 6. RAPTOR SPECIFICATIONS

### 6.1 ASTM SUMMARY

**Brief:** ASTM or equivalent testing externally verified for U-POL RAPTOR to support technical specifications.

**Method:** Materials prepared as set out in relevant test method. Where a primer was used 2 coats of U-POL RAPTOR Anti-Corrosive Epoxy Primer were applied and allowed to cure overnight. Unless otherwise stated the substrate is cold rolled steel prepared by abrading with 80 grit abrasive, cleaned and degreased before subsequent coating applied. RAPTOR was applied using a Schutz gun at 50 psi. Application as one medium and one light coat with a 60-minute flash off time observed between coats resulting in a dry film build  $\approx 330\mu$ .

RAPTOR was allowed to cure at room temperature for a minimum of 14-days before testing.

Property	Test Method	U-POL RAPTOR	U-POL RAPTOR over U-POL Epoxy primer
Salt Spray Resistance	ASTM B 117-16	Scribe creep (maximum width both sides) 250hrs:- 1.3mm 500hrs:- 2.6mm 750hrs:- 3.0mm	Scribe creep (maximum width both sides) 250hrs:- 1.05mm 500hrs:- 1.50mm 750hrs:- 2.32mm
Water Immersion	ASTM D870-15 (38°C for 30-days)	Slight to moderate Colour change (fading) no blistering	Slight to moderate Colour change (fading) no blistering
Taber Abrasion Resistance	ASTM D4060-14 (CS-10 1000g wheel)	8590 cycles until wear through to substrate	
Pencil Hardness	ASTM D3363-05(2011)e2	Gouge hardness of 6H	
Adhesion	ASTM D3359-09e2 Method A	5A (No peeling or removal)	5A (No peeling or removal)
Chip Resistance	ASTM D2794-93(2010)	<b>23°C:</b> 93 inch pounds (10.5 Joules) <b>30°C:</b> 70 inch pounds (7.9 Joules) <b>0°C:</b> 64 inch pounds (7.2 Joules)	<b>23°C:</b> 68 inch pounds (7.7 Joules) <b>30°C:</b> 104 inch pounds (11.75 Joules) <b>0°C:</b> inch pounds (5.2 Joules)

Property	Test Method	U-POL RAPTOR																
Chemical Resistance	ASTM D1308 Method 3.1.2 Spot Test, Open	<b>60 minutes</b> Pass = No visual change in Colour or gloss and no blistering. Xylene:- Pass 10% NaOH:- Pass Hydraulic Oil:- Pass Gasoline:- Pass Diesel:- Pass Water:- Pass 50% Ethylene Glycol:- Pass Motor Oil:- Pass	<b>16-hours</b> Pass = No visual change in Colour or gloss and no blistering. Adhesion (ASTM D3359 Method A) Xylene:- Pass. Adhesion 2A 10% NaOH:- Pass. Adhesion 5A Hydraulic Oil:- Pass. Adhesion 5A Gasoline :- Pass. Adhesion 5A Diesel:- Pass. Adhesion 5A Water:- Pass. Adhesion 5A 50% Ethylene Glycol:- Pass. Adhesion 5A Motor Oil:- Pass. Adhesion 5A															
Dielectric Breakdown	ASTM D 149	Breakdown voltage:-1.5kV Breakdown strength:-4.8 kV/mm																
Anti-Slip	BS 7976-2	Dry:- Pendulum test value 54, slip risk Low Wet:- Pendulum test value 23, slip risk High  With RAPTOR Traction:- Dry:- Pendulum test value 58, slip risk Low Wet:- Pendulum test value 45, slip risk Low																
	ASTM E303-93	TRL #55 Slider- RAPTOR : 27 TRL #55 Slider- RAPTOR Traction : 54																
Critical Radiant Flux of Floor-Covering Systems Using a Radiant Heat Energy Source	ASTM E-622	Optical Density Test Result Summary Results given as an average <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th></th> <th>NON-FLAMING</th> <th>FLAMING</th> </tr> </thead> <tbody> <tr> <td>Ds @ 1.5 min.</td> <td>3.6</td> <td>8.0</td> </tr> <tr> <td>Ds @ 4.0 min.</td> <td>22.9</td> <td>25.5</td> </tr> <tr> <td>Dm</td> <td>80.8</td> <td>32.9</td> </tr> <tr> <td>Dm(corr)</td> <td>79.8</td> <td>30.1</td> </tr> </tbody> </table>			NON-FLAMING	FLAMING	Ds @ 1.5 min.	3.6	8.0	Ds @ 4.0 min.	22.9	25.5	Dm	80.8	32.9	Dm(corr)	79.8	30.1
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Dm	80.8	32.9																
Dm(corr)	79.8	30.1																

ASTM reports available on request.

# 7. APPENDIX

## 7.1 GLOSSARY

Word	Further definition
2K	2 component, requires a base and a hardener to be mixed in the correct proportion to chemically cure
Acid Etch Primer	A thin primer that is acidic enough to chemically bond with metal, producing better adhesion between the substrate and the next paint layer
Acrylic	A polymer made from variants of acrylic acid with the –OH functional group as a reactive group – a common polymer for coatings
Adhesion Promoter	A thin layer of material containing additives that bond with the substrate, producing better adhesion between the substrate and the next paint layer
Air Dry	Allowing painted panels to dry at room temperature
Amine	Molecules containing the –NH functional group which can be used as either the hardener for an epoxy or a catalyst for the polyurethane reaction
Application	How paint is put onto the panel – described in this guide is spraying in various ways and rolling
Blushing	A white Colour on a coating, usually caused by low temperature and high humidity, especially before the coating is fully cured
Catalyst	Material that increases the rate of reaction by providing a lower activation energy path but is not consumed
Degreaser	Solvent used to clean substrates and remove contamination
Double Diaphragm Pump	A pump which creates a very low pulse material flow to allow use of shear / moisture sensitive materials
Drop Coat	A sprayed coat of paint that only gives partial coverage that looks like small drops of paint – usually the second coat, and usually achieved by fast sweeping motions with the spraygun, at higher pressure, further away from substrate
Epoxy	A polymer containing an oxygen in a ring that reacts with an amine to form a highly adhesive coating that yellows under UV exposure
Flash-Off	The time between applying 2 coats of paint which allows solvents to evaporate from the 1st coat
Full Coat	A coat of paint that gives full coverage of the layer beneath
Galvanised Steel	Steel dipped in zinc form a layer to prevent corrosion
Gloss	How shiny a coating is, how much light is reflected from the surface
Gun - Airless	A gun attached to a very high pressure pump (3000psi) which atomises the paint and can be used with a siphon feed, gravity feed or pressure feed
Gun - HVLP	A high volume, low pressure gun that atomises paint into a fine mist to give flatter coats and better coverage
Gun - Schutz	A gun with a dip tube and large orifice to allow larger amounts / droplets of material to be painted
Gun – Vari-Gun	A variant of Schutz gun which has an adjustable cap to control volume of material expelled, thus controlling the final texture of paint
Isocyanate	A polymer with the NCO group commonly found in 2K coatings hardeners. This reacts with –OH functional groups to form a polyurethane.
Low Bake	Baking painted panels in a spraybooth oven, typically set to give a panel temperature of 60°C (140°F)
Matte	A dull finish that doesn't reflect light well
Mixing Ratio	The ratio a base and a hardener is mixed at, usually expressed as a volume ratio although weights may also be given
Monomer	Small molecules that can react with other small molecules to form polymers
OEM Paint	Paint applied to a substrate by the original equipment manufacturer
Panel Temperature	Temperature of a panel in an oven (typically 10°C lower than oven temperature)

Continued →


































Word	Further definition
Polyester	A polymer that includes the O=C-O group. These typically have a high level of the –OH functional group and polyesters tend to be used to add flexibility to coatings.
Polyester (Unsaturated)	Polyesters that contain double bonds in the polymer backbone and are used in bodyfillers. They cross link to a hard mass when catalyzed (typically with benzoyl peroxide or cobalt based catalysts).
Polymer	A large molecule made of many monomers joined together
Polyurethane	A crosslinked polymer formed most commonly by the reaction of acrylics with isocyanates which exhibits high durability, UV resistance and Colour retention
Popping	Holes in the surface of a coating, caused by solvent evaporating through a curing / cured film
Primer	Coating that provides a flat, highly adhesive layer for topcoats to be painted over
Release Agent	An additive added to plastics to help release them from the mould they are formed in – can make it difficult for paint to adhere to plastics
Rheology	The study of flow – describes a paint's viscosity and build / texture
Sealant	A material that is used to seal joints between 2 parts of a substrate
Substrate	The surface to be painted

## 7.2 PACK SIZES, LEAD TIMES AND MINIMUM ORDER QUANTITY

See local representative for availability and support on pre-made Colours.



## 7.3 KEY TO PICTOGRAMS

Pictogram	Description	Pictogram	Description	Pictogram	Description
	Protect from direct sunlight		Protect from frost		Keep dry
	Keep container closed		Abrade		Viscosity
	Number of coats		Variable settings (aerosol)		Adjustable nozzle
	Flash off time		Spray gun applied		Degrease
	Cure time (fillers)		Drying time (coatings)		Mixing ratio for fillers
	Application (filler)		Spray tip size		Mixing ratio for coatings
	Spray pattern		Gravity gun applied		Machine abrading
	Refer to TDS		Schutz gun applied		Shake container
	Storage		Spray distance		Invert can after use
	Spray upright		Stir tin before use		Infra Red
	Polish		Air drying time at 20°C		Force drying time at 60°C
	Roller application		For PPE recommendations refer to SDS		

## 7.4 REGULATORY INFORMATION AND DATA SHEETS

Product Description	Product code	TDS	SDS
RAPTOR Black	RLB/S1 RLB/S4 RLB/5 RLB/200	✓	✓
RAPTOR Tintable	RLT/S1 RLT/S4 RLT/5 RLT/200	✓	✓
RAPTOR White	RLW/S4 RLW/200	✓	✓
RAPTOR Hardener	RLH/5	✓	✓
RAPTOR Anti-Corrosive Epoxy Primer Gray	REP/1LK REP5LK	✓	✓
RAPTOR 2K Beige Epoxy Aerosol	REP/AL	✓	✓
RAPTOR Acid Etch Primer Aerosol	RPTEP/AL	✓	✓
RAPTOR Adhesion Promoter Aerosol	RPTAP/AL	✓	✓
RAPTOR Traction Anti-Slip Additive	RLTRC/SM	✓	✓
RAPTOR 2K Aerosol Black	RLB/AL	✓	✓
System 20 Fast Thinner/Reducer	S2044/1 S2044/5	TDS (UK)	SDS (UK)
System 20 Standard Thinner/Reducer	S2045/1 S2045/5	TDS (UK)	✓
System 20 Slow Thinner/Reducer	S2046/1 S2046/5	TDS (UK)	SDS (UK)
System 20 Waterbased Degreaser	S2000/5	✓	✓
System 20 Fast Solventbased Degreaser	S2001/5 S2001/2	✓	✓
System 20 Slow Solventbased Degreaser	S2002/1 S2002/5	✓	✓
Wipe #6 Degreaser Aerosol	WIPE/AL	✓	✓
Acid #8 Acid Etch Primer	ACID/1	✓	✓
Acid #8 Acid Etch Primer Aerosol Gray	ACID/AL	✓	✓
Grip #4 Adhesion Promoter Aerosol	GRIP/AL	✓	✓
System 20 S2003 Plastic Primer	S2003/1	✓	✓
U-POL Barcoat	BAR/1	✓	✓
Tigerseal Black Sealant	TIG/NB	✓	✓
Tigerseal Gray Sealant	TIG/GG	TDS (Cartridge) TDS (Sausage)	SDS (Cartridge) SDS (Sausage)
Tigerseal White Sealant	TIG/BW	TDS (Cartridge) TDS (Sausage)	TDS (Cartridge) TDS (Sausage)