

TECHNICAL DATA SHEET

FOR PROFESSIONAL USE ONLY

RANGERS

2K BEDLINER - POLYURETHANE PROTECTIVE COATING 3:1

PRODUCTS

RANGERS - 2K polyurethane protective coating

Hardener for RANGERS

Urethane Reducer

PRODUCT DESCRIPTION

2-component polyurethane protective coating with structure effect. Tough coating offers great chemical resistance against oil, gasoline, water and salt; as well as mechanical resistance against scratches and stains. High performance formulation contains UV Filters and anticorrosive additives that effectively protect against extreme climatic conditions, color fading, rust and corrosion. Any color can be added to the tintable Rangers version using a basecoat or pigments. Can be applied on various substrates with an UBS antigravel gun or any conventional gravity feed spray gun.

- Tough durable coating.
- Great chemical and mechanical resistance.
- Soundproofing properties.
- Anti-slip structure.



COLOR: black, tintable

VOLATILE ORGANIC COMPOUNDS

VOC for the mixture using an UBS gun = 389 [g/l] – 3.25 [lb/gal]

VOC for the mixture using a gravity feed gun (3:1+20%) = 530 [g/l] – 4.42 [lb/gal]

The share of VOC for the mixture is below 840g/l. These products fulfill the EU directive (2004/42/WE) that sets the VOC value for this product category (kat.B/5), as 840 g/l.

SURFACE PREPARATION

- Existing 2K coatings – exercise caution and conduct a solvent test to check the quality condition of the substrate.
- Always abrade, clean and degrease the surface before application.
- Do not apply the product on 1K primers. Instead, always prime the surfaces for the Rangers application with a 2k acrylic primer, 2K epoxy primer or 2k etching primer.
- Always wait the proper drying and hardening time of etching primer before application.
- Do not apply Rangers directly on bare original paint or directly on coatings of car body parts from the aftermarket.

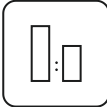
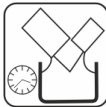
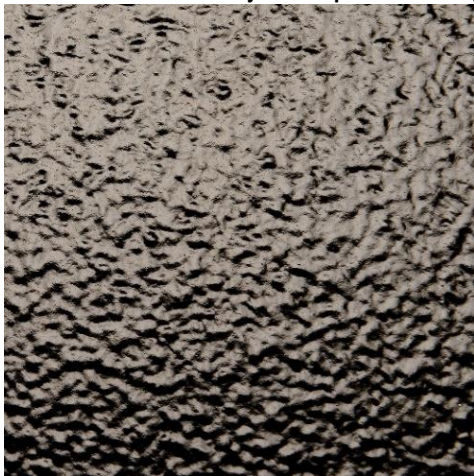
Substrates:

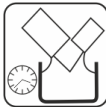
- Steel, galvanized steel, stainless steel, aluminum - apply after pre-sanding the surface with sandpaper of grade P180 to P320 or cleaning the surface with abrasive blasting to a cleanliness level of Sa 2 ½ according to PN-ISO 12944-4.
NOTE: To increase anti-corrosion protection and adhesion, it is recommended to apply Rangers over Troton epoxy or reactive primers (wash primer).
- Polyester laminates – sand using abrasive paper P180 or by using Troton's unwoven abrasive fabric, clean and degrease (Silicone Remover Troton).
- Polyester body fillers - sand using abrasive paper with gradation from P120 to P240, clean and degrease (Silicone Remover Troton).
- Plastic surfaces - degrease (Silicone Remover Troton), sand with abrasive paper P240 or with Troton's unwoven abrasive fabric, degrease again (Silicone Remover Troton), prime with an adhesive promoter, such as Plastic Primer Troton. Due to the many different types of plastic, adhesion testing is advised.

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APPLICATION

  			
		UBS	CONVENTIONAL GUN
	Mixing ratio	3:1	3:1+10÷20%
	Nozzle	-	1.4÷2.5 mm
	Inlet pressure	2÷4 bar 29÷58 psi	2 bar 29 psi
	Distance	20÷50 cm 7,87÷19,69 inches	20÷50 cm 7,87÷19,69 inches
	Number of layers	2	2
	Flash off between layers	30÷50 min	30÷50 min
	Ready for assembly	3 days	3 days
	Through dry (severe conditions)	7 days	7 days
	Efficiency	2,5÷3 m ² 26,9÷32,3 ft ²	3,5÷6,5 m ² 37,7÷69,9 ft ²

APPLICATION PROCESS RANGERS BLACK/TINTABLE						
UBS GUN						
	MIXING RATIO 3:1		by volume	by weight		POT LIFE
	RANGERS Hardener		630 ml 210 ml	790 g 210 g		About 1 h at 20°C (68°F)/DIN4.
Shake the product before opening. Open the lid, add hardener and close back the lid. Shake very well.						
	DRYING TIME					
	Dust dry: 1 h/ 20°C (68°F)					
	Touch dry - ready for assembly: 3 days/ 20°C (68°F)					
	Through dry (severe conditions): 7 days/ 20°C (68°F)					
Temperatures below 20°C (68°F) significantly increase the hardening time						
	BAKING					
	In order to accelerate the physical drying time we recommend baking under a maximum temperature of 45°C (113°F) for 50-60 minutes. Before baking wait the appropriate evaporating time of 1,5 to 2 hours after application.					
ATTENTION! Baking does not accelerate the dry through time. It is recommended to wait 7 days to achieve total hardness of the coating (under severe conditions).						
	NUMBER OF LAYERS					
	2 layers. 1 dry layer of approx. 150µm (5,9mils).					
1. First layer – spray evenly with sweeping motion and pressure of 2-4 bar (29÷58 psi) until the proper coverage is obtained. The distance from the surface to be painted should be of 50cm (19,69 inches). 2. Allow to flash off for 30÷50 minutes between coats. 3. In order to obtain the desired texture reduce the pressure and increase the distance from the surface to be painted.						
To achieve fine texture, apply the second layer with a fine mist spray by reducing the pressure and material flow.						
The distance from the object and pressure change the created structure.						
 						

APPLICATION PROCESS RANGERS BLACK/TINTABLE						
GRAVITY FEED SPRAY GUN						
	MIXING RATIO 3:1		by volume	by weight		POT LIFE
	RANGERS		630 ml	790 g		about 1 h at 20°C (68°F)/DIN4.
	Hardener		210 ml	210 g		
	Reducer		84÷168 ml	74÷148 g		
	Shake the product before opening. Open the lid, add hardener and close. Shake very well. Add thinner and shake again until all elements have been incorporated.					
	DRYING TIME					
	Dust dry: 1 h/ 20°C (68°F)					
	Touch dry - ready for assembly: 3 days/ 20°C (68°F)					
	Through dry (severe conditions): 7 days/ 20°C (68°F)					
	Temperatures below 20°C (68°F) significantly increase the hardening time.					

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	NUMBER OF LAYERS 2 layers. 1 dry layer of approx. 50µm (1,96 mils) Parameters for gravity feed gun Nozzle: 1,4÷2,5 mm; Inlet pressure: 2,0 bar (29 psi). 1. First layer – spray evenly with sweeping motion, pressure of 2 bar(29 psi) until the proper coverage is obtained. The distance from the surface to be painted should be of 40cm (15,75 inches). 2. Allow to flash off for 30÷50 minutes between coats. 3. In order to obtain the desired texture reduce the pressure and increase the distance from the surface to be painted. To achieve fine texture, apply the second layer with a fine mist spray by reducing the pressure and material flow. The distance from the object and pressure change the created structure.



RANGERS TINTABLE Color can be added to the tintable Rangers version with the addition of diluting products (for the whole mixture) • basecoat toner- 5÷10% • basecoat- 10÷15% • topcoat- 10÷15%
RANGERS BLACK/FOR COLOR Rangers can be over coated. Wait 24 hours for the product to dry. Abrade surface with Troton's fine unwoven abrasive fabric, clean and degrease (Silicone Remover Troton).
ANTI-SLIP ADDITIVE To create a non slip surface add TROTON RANGERS anti-slip additive powder(10g) (0,022lb, 0,353oz). 1. Packaging contains 10g (0,022lb, 0,353oz) of anti-slip additive needed to fill one bottle of RANGERS protective coating (800ml - 0,211gal mixture). 2. Pour the contents directly into the RANGERS bottle, add hardener and shake very well for about 2 minutes. 3. A non slip surface can be achieved by using an UBS or conventional gun. The anti-slip additive can be added to all layers or only to the last one.

RANGERS BLACK		HARDENER	
ml	g	ml	g
210	263	70	70
315	395	105	105
630	790	210	210
1260	1580	420	420
1890	2370	630	630

GENERAL NOTES

- Do not exceed recommended doses of hardener!
- The best results can be achieved at room temperature. The temperature in the body shop and the temperature of the product should be similar.
- When working with 2K products, it is recommended to use personal protection equipment. Protect the eyes and respiratory system.
- The rooms should be well ventilated.
- Clean the guns and equipment immediately after use.

Caution: To maintain safety, always follow the instructions given in the MSDS for the products.

STORAGE

Store the product components in temperatures of 15 to 25°C (59 to 77°F), in a sealed container, in dry and cool places, away from fire and heat sources, as well as direct sunlight.

Note:

1. Immediately close the tins after each use!
2. Protect hardener against freeze and humidity!

WARRANTY PERIOD

RANGERS - 2K polyurethane protective coating	– 24 months from the date of production
Hardener for RANGERS	– 18 months from the date of production
Premium Universal 2K Thinner	– 24 months from the date of production

PRODUCT	Art. No.
RANGERS 1 kg / set	13806 (tintable); 13828 (black)
Urethane Reducer	300010232; 300009053(1I;5I)

LIMITATION OF LIABILITY

The information contained in the TDS is up-to-date and correct on the day the information is released.

Because TROTON can not control or predict the conditions under which a product will be used, each user should review information in the specific context of the intended usage. To the maximum extent permitted by applicable law, TROTON shall not be liable for damages of any kind arising from the use or reliance on information contained in this TDS.

Given the variety of factors that can affect the usage and application of the TROTON product, some of which are only within the user's knowledge and control range, it is essential that the user evaluate the TROTON product to determine if the product is fit for a particular purpose and whether the product is suitable for the user's usage.

Under no circumstances shall TROTON be liable to the user or any third party for any indirect, derivative, incidental, special or punitive damages, including loss of profits resulting from the use of products manufactured by TROTON and / or TROTON's services.

All information are based upon the precise laboratory studies and many years of experience. The good market position does not release us from the constant supervision of our products quality. However, we are not responsible for the final effects of the improper storage or application of our products, as well as for work inconsistent with the good craft practice.

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