

TECHNICAL DATA SHEET

FOR PROFESSIONAL USE ONLY

RANGERS 2K BEDLINER - POLYURETHANE PROTECTIVE COATING 3:1 – VOC 2.6	
PRODUCTS	
RANGERS 3:1- 2K polyurethane protective coating. Hardener for RANGERS 1:3 Urethane Reducers VOC ZERO	
PRODUCT DESCRIPTION	COLORS: black, colorless (tintable)
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.	

VOLATILE ORGANIC COMPOUNDS
Rangers black VOC = 303.576 g/l - 2.533 lb/gal (< 2.6 lb/gal)
Rangers tintable VOC = 304.326 g/l - 2.539 lb/gal (< 2.6 lb/gal)

SUBSTRATES AND PREPARATION	
• Do not apply the product directly on bare metal. Rangers should be applied on primed surfaces or on 2K topcoats and basecoats after proper preparation (be careful with the application on old coatings, thinner testing is advised). • 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 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 – prime surfaces with a 2K epoxy primer, sand using abrasive paper with gradation from P180 to P320, clean and degrease (Silicone Remover Troton). • 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.

APPLICATION			
		UBS	CONVENTIONAL GUN
	Proportion 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		POT LIFE
	RANGERS Hardener	600 ml 200 ml		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.				
	HARDENING 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! <i>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).</i>			
	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+10÷20%	by volume		POT LIFE
	RANGERS Hardener Reducer	600 ml 200 ml 80÷160 ml		about 1 h at 20°C (68°F)/DIN4.
	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.			

	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. 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 / TINTABLE 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.

GENERAL NOTES • Do not exceed recommended doses of hardener! • Using such clear coats remember to spray first the edges and cavities and leave the front surfaces for the last stage of application. Thus we can avoid superfluous dust creation and achieve a smooth finish. • Best results of application are achieved when using a professional baking booth, or when varnishing in a room specially suited for this goal with room temperature of 20°C (68°F) . • Room temperature and the temperature of the product should be the same. • When working with 2K products, clean guns and equipment immediately after use. • The rooms should be well ventilated.

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 3:1	– 24 months from the production date.
Hardener 1:3 for RANGERS	– 18 months from the production date.
Urethane Reducers VOC ZERO	– 24 months from the production date.

PRODUCT	ART. NO.
RANGERS 3:1	(800 ml set): 12793; 12879
Hardener 1:3 for RANGERS	
Reducers Medium VOC ZERO	8562; 8561 (1l; 5l)
Reducers Fast VOC ZERO	7868; 8557 (1l; 5l)
Reducers Slow VOC ZERO	2289; 9235 (1l; 5l)

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 is based on meticulous laboratory tests and many years of experience. An established position on the market does not release us from continuous quality control of our products. However, we are not responsible for the final effects of improper storage or use of our products, and for work that is not in line with good craftsmanship.

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