TECHNICAL DATA SHEET

IGL COATINGS™ ECOCOAT ARMOR

Material no.

Specification	**154333**	Revision date	**20.10.2023**
Version	**1.4**		

IGL COATINGS ECOCOAT ARMOR

A TINTABLE BEDLINER FOR TRUCK BED PROTECTION.

Description

Ecocoat Armor is a two-component (2-K) bedliner for truck bed protection which provides hard, flexible and strong protection for your truck bed.

Benefits

Reinforced with carbon nanotubes.
Provides protection against impact, mechanical damage, and corrosion.
Resistant to a wide range of chemicals.
Imparts an anti-skid effect
Provides excellent adhesion to steel, aluminum and wood surfaces.

Technical Data

Mixing Ratio

	Spray gun Iwata W-77 with Ø2.5mm nozzle	**Spray Gun Schutz spray gun**
AR1 (binder) : AR3 (hardener)	100 : 22.5 (by weight)	
AR2 (colorant)	7 wt. %	
Diluent (For rough texture)	35 wt. %	28 wt. %
Diluent (For smoother texture)	Add up to 5 - 10 wt. % more	Add up to 1 – 2 wt % more

REMINDER: Always test on an inconspicuous area first. Kindly contact your local IGL Coatings representative if you need advice.

Preparation

Step 1: Cleaning the surface

- Clean the surface using Ecoclean Wash.
- Degrease and remove oily contaminants from the surface using Ecoclean Multi.
- Then, remove existing rust using Ecoclean Iron. Use P80-P180 grit sandpaper to remove stubborn rusts.
- Abrade the whole surface using P80-P180 grit sandpaper and clean the surface with water.
- Immediately, dry the surface using microfiber cloth.
- Degrease the surface using Ecoclean Precoat to improve the adhesion and the durability of the coating.

Step 2: Mixing the coating formulation

- The temperature during processing should be in the range of 10-30°C (50-86°F), **preferably at 15-25°C (59-77°F).**
- Mixing the formulation at room temperature is recommended.
- Prepare a 2-liter mixing container.
- Stir Ecocoat Armor AR1 using the provided stick for at least 1 minute. AR1 is originally slightly gel-like and will flow easier after stirring.
- Pour AR1, AR2, AR3, and diluent into the container in order.
- Proceed to stir for at least 2-3 minutes or until the mixture is smooth and well-mixed.
- After the mixing process, the mixture is ready to use. The mixture needs to be used within **60 minutes (Pot-life)**.

Step 3: Application process

- Preferably to conduct the application process at dust free area.
- Please refer to spraying guide for detail on application process using different spray techniques.

Step 4: Drying and Curing

- **Please refer to spray guide for dry to touch, tack free and cure time for different deposition profile.**
- The thickness of the coating and the surrounding temperature will directly affect the drying time of the coating. The more layers of coating applied will extend the full cure time of the coating.
- Too short interlayer coat time will dampen the texture formation of subsequent coating layer. It is recommended to have interlayer coating close to the end of tack free period for maximum interlayer adhesion and texture retention.
- Do not allow the newly coated surface to be in contact with water for at least 24 hours.
- Do not place any heavy load on the surface before the coating is fully cured (around 5 days).

Safety and Handling

This product does contain hazardous and flammable materials. Please wear appropriate personal protective equipment (PPE) when handling this product. Do not smoke when using this product. For your safety, toxicological data and information on property transportation, storage and use, please read the Safety Data Sheet (SDS) before using any **IGL Coatings products**. The SDS is available upon request via email from regulations@iglcoatings.com

Disposal

Dispose of contents/container in accordance with local and national regulations.

Storage

Ecocoat armor is storage-stable for at least 12 months in originally sealed containers.
Ecocoat armor AR3 (Hardener) is sensitive to moisture. Ensure the cap is closed tightly after use if there are leftovers. Keep the opened containers properly and use up as soon as possible.
The mixed formulation must be used within 60 minutes.

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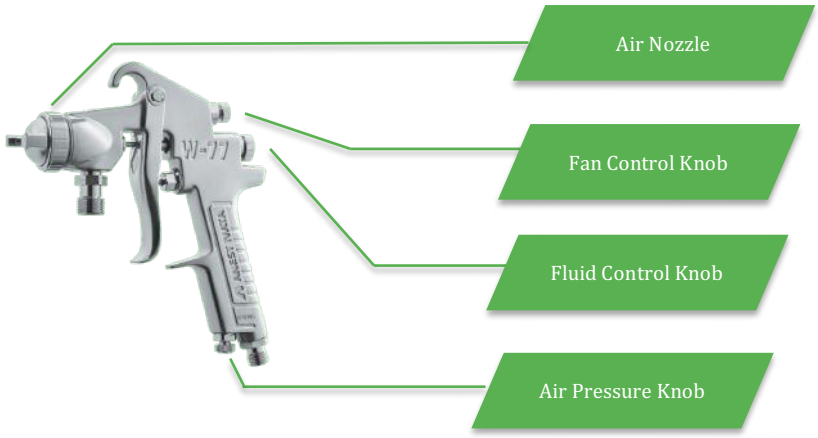
IGL COATINGS ECOCOAT ARMOR
HVLP SPRAY GUIDE

Description

This spraying guide comprises guidance to effectively apply Ecocoat Armor with a high volume low pressure (HVLP) spray gun.

Spray gun parameters



Spraying Process - HVLP Spray Gun

- Before filing, clean the spray gun using Part 4 (diluent) or thinner. Pour the coating mixture into the spray gun gravity cup once ready.
- Adjust the working pressure to 5-6 bar (72.5-101 psi).
- Adjust the fan control knob to 3 turns (counting from maximum closure). The fluid control knob is adjusted to 3 turns (counting from maximum closure).
- It is recommended to spray a test panel before the desired texture is achieved.
- Apply to the cleaned surface with an even sweeping motion, with a distance of 20 – 30 cm (around 1 foot) away from the surface to spray gun nozzle.
- To achieve 150 µm thickness of dry film coating and a rougher texture, apply 2 - 3 spray passes per spraying layer, with interlayer gap of maximum up to 60 minutes between application of each layer. (Shorter interlayer gap can produce smoother texture while longer the interlayer gap can retain more texture).
- If smooth texture is needed, an extra 5 - 10% of Part 4 (Diluent) can be added to reduce the viscosity of the coating. Adjust the viscosity by adding diluent bit by bit. Part 4 (Diluent) will affect the content of product VOC. Do consult local VOC regulation before using.

	3 spray passes per spraying layer
Consumption, g/ft^2	≈ 65
Consumption, g/m^2	≈ 700
Wet Film Thickness, µm	75

Drying time and Curing time

- **Dry-to-touch (at 25°C) : 3-5 minutes**
- **Tack-free (at 25°C) : 30 minutes**
- **Interlayer coat time : up to 60 minutes (depends on desired texture)**
- **Full cure time (at 25°C) : 5-7 days**

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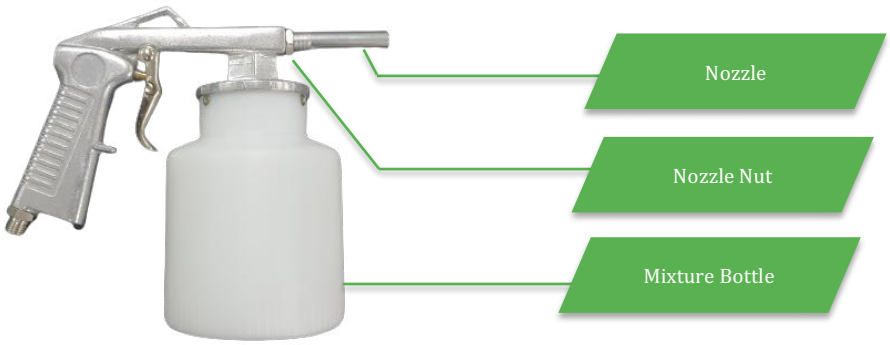
IGL COATINGS ECOCOAT ARMOR

SCHUTZ SPRAY GUIDE

Description

This spraying guide comprises guidance to effectively apply Ecocoat Armor with a Schutz spray gun.

Spray gun parameters



Spraying Process – Schutz Spray Gun

- Adjust the compressed air working pressure between 3 bar (43.5 psi) to 5 bar (72.5 psi) pressure. *Preferably using a pressure gauge for better air pressure control*
- Adjust the nozzle length by rotating the nozzle nut to 12 rotations from the maximum rotation. Tighten the nozzle to the spray gun.
- Attach the mixture bottle onto Schutz spray gun with siphoning tube immersed into the solution container.
- Apply to the cleaned surface with an even sweeping motion, with a distance of 30 cm (1 ft) for heavy deposition, 45 cm (1.5 ft) for medium deposition, and 60 cm (2 ft) for light deposition away from the surface to spray gun nozzle.
- It is recommended to spray a test panel to observe the effect of spraying with variable distance on the texture formation.
- In terms of layer combination, it is recommended to spray a heavy deposition layer for the first layer to ensure complete coverage of substrate for effective corrosion mitigation. Applying at least 2 to 3 layers in total with sufficient interlayer duration between application of each layer.
- For 2nd layer onwards, medium or light deposition spraying can be selected depending on the texture desired.

Layer	Layer characteristic	Wet Film thickness, µm	Dry film thickness, µm	Usage g/ft^2	Usage g/m^2	Set to touch, min	Tack Free, min
Single	Heavy	≈225	≈140	≈35	≈376	30	90
Single	Medium	≈175	≈100	≈30	≈323	10	40
Single	Light	≈100	≈ 50	≈20	≈215		
Double	Heavy + medium		135µ to 260				
Double	Heavy + light		140µ to 270				
Triple	Heavy + light + light		170µ to 300				

Remarks: Ambient temperature 25°C (77°F); Air Pressure 4 bar (≈60 psi)

Additional detail

- **Interlayer coat time** **: Up to 30 min (for smoother texture), up to 90 min (for rougher texture)**
- **Dry hard time (at 25°C)** **: 3 to 4 hours**
- **Full cure time (at 25°C)** **: 5-7 days**

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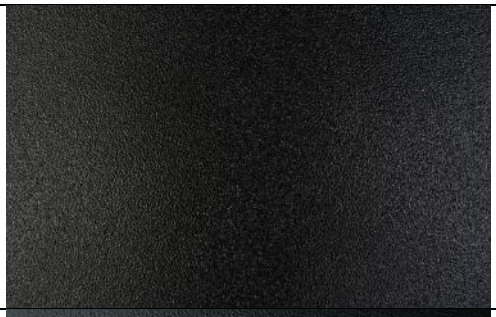
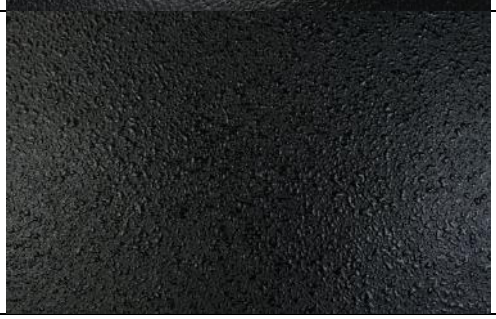
TEXTURE GUIDE

Parameters used	Optical Microscope images	Visual Observation
HVLP Spray Gun 35% Diluent		
HVLP Spray Gun 40% Diluent		
Schutz Spray Gun Heavy 28% Diluent		
Schutz Spray Gun Medium 28% Diluent		
Schutz Spray Gun Light 28% Diluent		

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Schutz Spray Gun Heavy + medium 28% Diluent		
Schutz Spray Gun Heavy + light 28% Diluent		
Schutz Spray Gun Heavy + Light + Light 28% Diluent