Technical Data Sheet

Color Top
Underbody Coating
Rail segment

Features

- Polyvinylbutyral and epoxy based coating.
- Usage direct to metal is possible with good corrosion protection.
- Usage as a 1K system.

Products

B11764144	Nova grey
B13138300	Black

Thinner

B11789639	2013111329043 13111329 W170KG KOMBI THINNER (not needed in case of heated spray)

Colour

- Nova grey MB7350, matt
- Black matt

Substrates and Surface Preparation

Substrates must be dry and free from all contaminants like fat, corrosion, scale or sweat.
Because of the variety of metal alloys and manufacturing processes, it is recommended to carry out a preliminary adhesion test. See Axalta's data sheet "Metal Substrates - Treatment before Coating"!

Tested bare metal surfaces:

- Rough steel surfaces (cast and forging parts; SA 2.5 acc. DIN EN ISO 12944-4): Very good adhesion. Highest requirements for parts can be achieved.
- Smooth fine steel surfaces: Adhesion slightly worse than on blasted rough surfaces. Highest requirements for parts can only be achieved partially.
- Bright steel surfaces: Adhesion is significantly worse than on rough blasted surfaces. Highest requirements for parts can only be achieved by an adequate pre-treatment (adhesion promoter).

Tested precoated surfaces:

- E-coat: Very good adhesion. Highest requirements for parts can be achieved.
- 2K EP pre-treatment: Adhesion comparable to e-coat and OK for highest requirements.

For professional use only!

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VOC w/o thinner addition (EU Directive 1999/13/EC) • 567 g/L

Product Preparation

Thinner 	B11789639 15-20% in case of conventional pneumatic application (not needed in case of heated spray)
Recommended Dry Film Thickness	**Min dft** To achieve highest requirements for parts, the following minimum thickness limits are essential: Corrosion protection precoated: 50µm bare metal: 100µm Stonechip resistance precoated: 100µm bare metal: 150µm **Max dft** A specific functional upper limit regarding the coating's quality is not existing. Also sag runs have no negative impact on the general quality. Nevertheless it is recommended not to exceed 250µm on larger areas.
Sagging Limit	Attention to the sagging limit in relation to the application method! Test method acc. MBN10494-3 In case of pneumatic application with gravity feed gun the sagging limit is at 200µm±50

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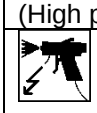
Application

	Application viscosity DIN 4 mm at 20°C (s)	Thinner (%)	Spray nozzle (mm)	Pressure (bar)	Number of coats
 **Gravity feed**  **Suction feed** (High pressure spraying)	25-30	15-20	1.6-1.8	2.5-3.0	2-3
HVLP **HVLP** (Low pressure spraying)	25-30	15	1.8	2.0-2.5	2-3
Heated Spray	65-71	0	>1.8	2.0-3.0	1-2
	Recommended temperature 35 – 40°C Usually used to prevent local or equipment related variance in viscosity and to support quicker evaporation of solvents.				
 **Airless**	without thinner	0	0.39-0.43	2.0-3.0 air ca. 80-120 material	2
 **Pressure pot** **Membrane pump** (High pressure spraying)	25-30	15	1.3-1.5	1.0-2.0 air 2.5-3.0 material	2-3
 **Electrostatic**	Not recommended due to low resistivity.				
 **Brush and Roll**	According to the advice of the Technical Representative. With thin-gauge steel fabrications or structures of complex configuration, the nominal prescribed filmbuild may be difficult to achieve, therefore additional application might be needed.				

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Drying

Forced drying	Recommended flash time before oven: 10min Recommended object drying conditions: Min drying condition: 25min 70°C Max drying condition: 40min 100°C Deviant drying conditions require a pre-check.
Heating-Up Rate	Recommended maximum heating-up rate to prevent popping: From 0 – 70°C: 7.0°C/min From 70 – 100°C: 1.5°C/min
	After forced drying the physical drying process by evaporation of solvents still continues over a longer period of time. To secure following mechanical stress after forced drying like disposure on transport racks or assembly steps, it is recommended to consider drying conditions in relation to film thickness. Very high and insufficiently dried layer thickness might significantly reduce the material's mechanical resistance.

Degree of Drying acc. DIN53150

Table showing drying times at room temperature to reach degree of drying with and w/o prior forced drying in an oven.

Degree of Drying	**Grade 1**		**Grade 2**		**Grade 3**		**Grade 4**	
Drying (object)	**25min 70°C**	**no**	**25min 70°C**	**no**	**25min 70°C**	**no**	**25min 70°C**	**no**
dft [µm]	**Time to dry at room temperature to reach drying grade [h]**							
50	< 0,5	< 0,5	< 0,5	0,5	< 0,5	0,75	< 0,5	1
100	< 0,5	< 0,5	< 0,5	1	< 0,5	1,5	0,5	4
150	< 0,5	< 0,5	< 0,5	1,5	0,5	3	1	6
200	< 0,5	0,5	0,5	3	1	6	8	8

Information about further drying process:

The coating needs about one week to completely dry in case of a dft of 150µm. In case of higher dft this can take up to several weeks.

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Recoatability

Recoatability with Topcoats

In a multilayer system with recoat of the 1K axle coat with a topcoat (i.e. chassis coating), the compatibility needs to be considered specifically in case of solventborne topcoat systems.

Recoatability with Itself

The 1K axle coat might be recoated with itself for repair (spot) or double run through the paint line.

Product data

	Solids Weight (%) +/- 2.5	**Density** (kg/L) +/- 0.01	**Theoretical coverage** (at 80 µm) (m^2/kg)	**Theoretical material consumption** (at 80 µm) (g/m^2)
Packaged	51.0	1.16	3.71	270
B11764144 + 20% B11789639	42.6	1.10	3.10	323
B11789639	0	0.87		

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Remarks

	• Stir well before use.
Storage Conditions	• 18 months from manufacturing (Refer to the label on the original can!)

Safety

Consult the Safety Data Sheet prior to use.
Observe the precautionary notices displayed on the container.

Information

The information provided herein corresponds to our knowledge on the subject at the date of its publication. This information may be subject to revision as new knowledge and experience becomes available. The data provided fall within the normal range of product properties and relate only to the specific material designated; these data may not be valid for such material used in combination with any other materials or additives or in any process, unless expressly indicated otherwise. The data provided should not be used to establish specification limits or used alone as the basis of design; they are not intended to substitute for any testing you may need to conduct to determine for yourself the suitability of a specific material for your particular purposes. Since Axalta cannot anticipate all variations in actual end-use conditions Axalta makes no warranties and assumes no liability in connection with any use of this information. Nothing in this publication is to be considered as a license to operate under or a recommendation to infringe any patent rights.
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