

**P997-LA01 Liquid Aluminum used in repair process of Mercedes Benz 047 Alubeam**

**ABPTS007**

The following process outlining the repair of Mercedes Benz 047 Alubeam paint schemes has been approved by NEXA Autocolor. When repairing Mercedes Benz vehicles finished in this paint scheme, you should contact your Nexa representative for full documentation on the approved product systems and processes.



**DESCRIPTION:**

- Mercedes Alubeam 047 is a special effect silver color which gives the paint a “Liquid Metal” appearance. Unlike a traditional metallic or pearlescence this finish appears more like “Molten Metal” that wraps the entire vehicle. Because of the minute particle size of this special pigmentation, light is reflected differently thus making this a very unique finish.
- The OEM process utilizes a specialized 4 coat system made up of a dark undercoat, followed by a sanded clearcoat, to which the tinted liquid aluminum is applied and then overcoated by another clearcoat layer. See the following illustration;

Final Scratch Resistant Clearcoat Layer
Tinted Liquid Aluminum Layer
Sanded Clearcoat
Dark Undercoat
OEM Substrate / Primer

The repair outlined in this document duplicates the OEM process as closely as possible utilizing products similar to those used at the factory.

## PREPARATION OF SUBSTRATE:

- The damaged body work of the vehicle should be repaired using the Nexa Autocolor approved repair and undercoating system for the substrate of the body panels being repaired (Aluminum, Steel, and Plastic etc).
- Finishing the repair with Spectral Grey SG07, P565-5407 HS Plus Primer Surfacer (product bulletin N4.1.2C) is recommended as the ground coat.

## PREPARATION OF COLOR CHECK PANEL

**NOTE:** Due to the possible variation in color on a particular vehicle as well as application technique, it is essential that a color check panel be prepared to align the color before applying any basecoat color to the vehicle. The color check panel should be prepared as follows:

- Mix and apply a SG07 sealer to the entire color check panel insuring full coverage. Allow suitable flash times between coats. Allow the sealer to completely dry before applying the sandable clearcoat layer.
- Mix and apply clearcoat to the entire color check panel. 2 coats should be applied so that enough film build is present to allow for sanding. The use of the following premium Nexa clearcoats are recommended;
  - P190-5520, Clearcoat, product bulletin N5.11
  - P190-643, HS Clearcoat, product bulletin N5.9.1
  - P190-6659, Express Clearcoat, product bulletin N5.9.2
  - P190-6720, MS Clearcoat-LV, product bulletin N6.3.2
  - P190-6730, HS Plus Clearcoat, product bulletin N5.10C
  - P190-6759, Express Clearcoat-LV, product bulletin N5.9.2C
  - P190-6800, HS Express Clearcoat, product bulletin N5.9.4
- Once the clearcoat has fully dried, remove any orange peel or texture with P1200 dry then further refine the surface with P1000 Trizact wet to minimize any final scratches.

**NOTE: This sanding of the clearcoat step is critical due to the leafing nature of the Liquid Aluminum material. Any imperfection (dirt or sand scratches) will telegraph through to the final finish.**

- Mix the Aquabase Plus Basecoat formula for Mercedes Alubeam 047 (Nexa code 7ERFB). The formula can be found on PaintManager® or On-line Color.
- Reduce basecoat 50% (2 : 1 ratio) with P980-5000 Waterborne Thinner.
- Spray gun set up used is a 1.2mm - 1.3mm HVLP or Compliant. This process is to be sprayed exactly as you will be spraying the vehicle to insure accurate color alignment.
- Apply 1<sup>st</sup> double cross coat @ full legal pressure at the cap with fluid set at 1 ¼ - 1 ½ turns open and flash off until matt (using air blower).
- Apply 2<sup>nd</sup> double cross coat as you did the 1<sup>st</sup> and flash off until matt (using air blower).
- If opacity or full coverage has been achieved, proceed to the next step, otherwise apply a 3<sup>rd</sup> double cross coat and flash off until matt (using air blower).
- Apply one double or triple mist coat @ full legal pressure at the cap with fluid set at ¾ turns open and flash off until matt (using air blower).
- Care should be taken to apply this final basecoat layer very dry and even without any “wetting up” of the basecoat.

- Allow the basecoat to flash for 20 - 30 minutes before clear coating.
- Mix and apply P190-6490 Scratch Resistant Clearcoat (product bulletin N7.5) to the entire panel.

#### **CHECK THE COLOR:**

- Use the completed color check panel to evaluate the color on the car.
- If the color achieved on the color check panel is considered to be “blendable” to the car proceed to the section “GROUND COAT PREPARATION AND SANDABLE CLEAR APPLICATION”.
- If tinting of the color is necessary, tint utilizing toners within the original formula and prepare an additional color check panel and re-check. Continue in this fashion until a blendable match is achieved.

#### **GROUND COAT PREPARATION AND SANDABLE CLEAR APPLICATION:**

Preparation of the substrate is performed in the same manner as the color check panel with the exception of the blend panel. Preparation for the blend panel will require finer sanding as described below.

**NOTE:** It is important to achieve full coverage or opacity when repairing this Mercedes Benz 047 color. The use of SG07, P565-5407 HS Plus Primer Surfacer will provide the best reference as to when full coverage has been achieved.

- Sand the SG07, P565-5407 HS Plus Primer Surfacer (ground coat) with P600 grit or finer before applying the sandable clearcoat layer.
- Mix and apply clearcoat to the entire repaired panel. Blending of this clearcoat layer is not recommended. Apply clear “edge to edge”. 2 coats should be applied so that enough film build is present to allow for sanding. The use of the following Nexa clearcoats are recommended;
  - P190-5520, Clearcoat, product bulletin N5.11
  - P190-643, HS Clearcoat, product bulletin N5.9.1
  - P190-6659, Express Clearcoat, product bulletin N5.9.2
  - P190-6720, MS Clearcoat-LV, product bulletin N6.3.2
  - P190-6730, HS Plus Clearcoat, product bulletin N5.10C
  - P190-6759, Express Clearcoat-LV, product bulletin N5.9.2C
  - P190-6800, HS Express Clearcoat, product bulletin N5.9.4
- Once the clearcoat has completely dried, remove any orange peel or texture with P1200 dry then further refine the surface with P1000 Trizact wet to minimize any final scratches.

**NOTE: This sanding of the clearcoat step is critical due to the leafing nature of the Liquid Aluminum material. Any imperfection (dirt or sand scratches) will telegraph through to the final finish.**

- Where blending of the basecoat occurs as part of the repair, the area of the panel from the basecoat blend to the edge of the panel should be finished with P3000 wet.

#### **AQUABASE PLUS CODE 047 APPLICATION:**

- Mix the Aquabase Plus Basecoat formula for Mercedes Alubeam 047 (Nexa code 7ERFB). The formula can be found on PaintManager® or On-line Color.
- Reduce basecoat 50% (2 : 1 ratio) with P980-5000 Waterborne Thinner.
- Spray gun set up used is a 1.2mm - 1.3mm HVLP or Compliant. This process is to be sprayed exactly as you sprayed the color check panel to insure accurate color alignment.

- Apply 1<sup>st</sup> double cross coat @ full legal pressure at the cap with fluid set at 1 ¼ - 1 ½ turns open and flash off until matt (using air blower).
- Apply 2<sup>nd</sup> double cross coat as you did the 1<sup>st</sup> and flash off until matt (using air blower).
- If opacity or full coverage has been achieved, proceed to the next step, otherwise apply a 3<sup>rd</sup> double cross coat and flash off until matt (using air blower).
- Apply one double or triple mist coat @ full legal pressure at the cap with fluid set at ¾ turns open and flash off until matt (using air blower). Care should be taken to apply this final basecoat layer very dry and even without any “wetting up” of the basecoat.

**NOTE: If blending of the basecoat is required, apply the first double cross coat to the primed area, then extend each subsequent coat a little further into the panel using normal blending techniques. As with full panel application, care should be taken to not “overwet” the final basecoat blended edge. The final mist coat should be applied very dry and even without “wetting up” the basecoat color.**

- Flash off the basecoat for 20 - 30 minutes before clear coating.

#### **FINAL CLEARCOAT APPLICATION:**

- Mix and apply P190-6490 Scratch Resistant Clearcoat (product bulletin N7.5) to the entire panel.
  - Apply the first coat of clear as a light coat. Avoid overwetting as movement of the liquid aluminum material may occur resulting in blotchiness.
  - Allow the first coat of clear to flash 10 – 15 minutes
  - Apply a second full coat of clear.
  - A third full coat may be applied if necessary.
  - Bake at 140°F (metal temp) for 30 minutes.
- If necessary and to achieve the smoothest possible final finish, sand with P1200 or finer (dry) and then re-apply the Scratch Resistant Clearcoat.