

Basecoat SB Repair Process

System

Mazda 51K Rhodium White Premium

06/01/2023

TSB# L23.02

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Mazda describes Rhodium White Premium (51K) as a special paint color born from their unique Takuminuri painting technology. This color's fine grain accentuates the shadows on the surface of the vehicle, complementing the metallic texture and delivering a unique effect by utilizing an extremely thin reflective layer that is smoothly aligned above the white pigmented layer. Refinishing this unique color requires special mixing and application techniques described in this bulletin.



Safety Considerations

- Use suitable personal protection.
- When exposed to paint or solvents AkzoNobel recommends the use of a fresh air supply respirator.



Basecoat System Step

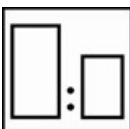
- Groundcoat

Fluid Tip

- 1.3 - 1.5mm
- 1.2 – 1.4mm
- 1.2 – 1.3mm
- 1.2 – 1.3mm

Spray-Gun*

- HVLP
- Compliant Gravity
- HVLP or Compliant Gravity
- Compliant Gravity



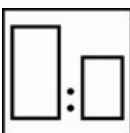
Mix
100
50

BY VOLUME – Groundcoat Layer

Parts Mazda 51K groundcoat color formula
Parts Lesonal Reducer

NOTE:

Sprayout letdown panels are necessary – refer to the complete TSB for detailed instructions.



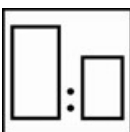
Mix
100
50

BY VOLUME – Wet Bed Mixture (for spot repairs)

Parts MM 05
Parts Lesonal Reducer

NOTE:

Wet bed is necessary for the seamless transition of the intermediate groundcoat mixture.



Mix
100
50

BY VOLUME – Groundcoat Transition (Intermediate) Mixture (for spot repairs)

Parts of groundcoat color formula (reduced)
Parts of wet bed mixture (reduced)

NOTE:

Immediately apply the groundcoat transition mixture before the wet bed has dried.



Mix
10 g
200 g

BY WEIGHT – Midcoat (Effect) Layer

Mazda 51K layer 2 color formula
Lesonal Reducer

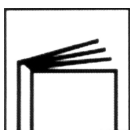
NOTE:

The groundcoat layers must be fully flashed before midcoat application. The midcoat layer is applied as a mist (orientation) coat using increased distance. Flash after each coat until completely dry and use the preselected sprayout panel to check color match.



Fine Atomization Required for Midcoat

- Adjust fluid from fully closed to approximately two turns open to achieve optimal atomization.
- The midcoat should be applied in thin, mist-coat type layers while using increased distance.
- Overapplication will result in mottling/clouding.



Clearcoating

- After midcoat is fully flashed, allow an additional 10 minutes before clearcoat application.
- To ensure compliance with VOC regulations, Mazda 51K color formulas must be clearcoated with a Lesonal low VOC clearcoat.

*HVLP spray gun – 10 psi (<0.7 bar) at air cap, maximum. Compliant spray gun – consult manufacturer specifications.
Read the complete TSB for detailed information.

Basecoat SB Repair Process Mazda 51K Rhodium White Premium

Description

Basecoat SB Mazda 51K is a three-stage solventborne basecoat system that consists of three separate layers that are required to be applied to create this special effect color based on the following steps:

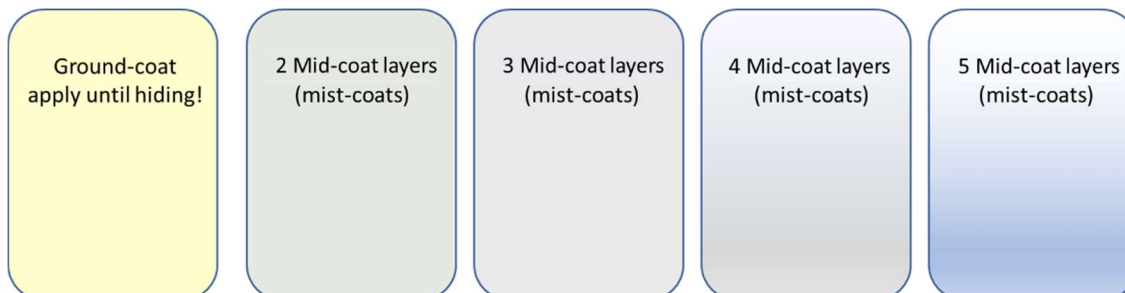
1. Basecoat ground coat color
2. Basecoat midcoat (effect layer)
3. Clearcoat finish



Creating Sprayout Panels for Color Match

Correct color match needs to be determined by producing a number of color sprayout samples. The color is determined by achieving full hiding of the ground coat color, then by applying a number of coats with the midcoat color to determine the correct color match. The process to determine the correct color match is as follows:

1. Mark the sprayout panels on the back with the number of midcoat layers to be applied.
 2. Distribute sprayout panels evenly in the required number of panels (usually 3-5).
 3. Apply a white primer.
 4. Apply the ground coat color according to the Basecoat SB TDS until hiding. Allow to completely flash-off.
 5. Mask off all panels individually except one. These should be masked in a way that, after each layer, the masking can be removed from one panel at a time.
 6. Next, apply one single coat of the midcoat* color to the unmasked panel.
- * Midcoats should be applied similar to an orientation (mist) coat for a 2-stage metallic color.**
7. Allow sufficient flash-off time of the midcoat and remove the masking from one panel before continuing.
 8. Next apply one single coat of the midcoat to the remaining panels
 9. Repeat steps six and seven, resulting in spray-out panels that vary from 2 to 5 midcoats.
 10. Allow 10-15 minutes flash-off time at 75°F (25°C) prior to clearcoat application
 11. Before clearcoat application, mask off a part of the panel to show the final basecoat color (without clearcoat). This can be used to check the color during the repair process.
 12. Apply two single layers of Lesonal clearcoat. Avoid applying the first coat too heavily.



By using these panels, the technician can determine the right number of midcoat layers for a good color match.

- Number each panel, indicating the number of midcoats on the panel.
- Due to personal application differences, it is advised that each painter create their own sprayouts.
- To obtain an accurate color match, spray the panels as if applying to a vehicle, i.e., place all sprayouts on one larger panel and spray the complete panel for each coat.

DO NOT SPRAY EACH PANEL SEPARATELY.

- The application results will vary depending on temperature, humidity, and painter. These variables could have an influence on the number of midcoat layers required.

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Safety Considerations



- Use suitable personal protection.
- When exposed to paint or solvents AkzoNobel recommends the use of a fresh air supply respirator.

Suitable Substrates



- Properly prepared stable existing finishes
- Lesonal products approved suitable for Basecoat SB

Surface Preparation

Primer (sanding) area



Final sanding step P600

- Initial sanding steps may be executed with a coarser sanding grit (P400-P500)
- Respect a maximum 100 sanding grit step difference or less throughout the sanding procedure

Basecoat blend area



Final sanding step P1000

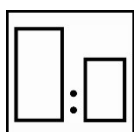
- Initial sanding steps may be executed with a coarser sanding grit (P600 - P800)
- Respect a maximum 200 sanding grit step difference or less throughout the sanding procedure



Surface cleaning

- Remove contamination using the appropriate surface cleaners and technique.

Groundcoat Mixing and Application



BY VOLUME
STICK # 1

Mix

100
50

By Volume

Parts Mazda 51K groundcoat color formula
Parts Lesonal Reducer

Note: Ensure a smooth groundcoat application through proper reducer choice and application technique.



Spray-Gun Set-Up

- 1.3 – 1.5mm HVLP Gravity
- 1.2 – 1.4mm Compliant Gravity

Application Air Pressure:

- HVLP – 10 psi (<0.7 bar) at air cap, maximum.
- Consult manufacturer specifications.

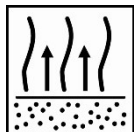


- Apply groundcoat in smooth, closed coats until complete hiding. Completely flash-off after each coat.

Note: Ensure a smooth transition from the groundcoat color to the OEM color.

Basecoat SB Repair Process

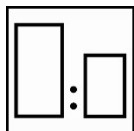
Mazda 51K Rhodium White Premium



- Groundcoat must be flashed until completely dry before midcoat application

Wet Bed and Intermediate Coat Mixing for Spot Repairs

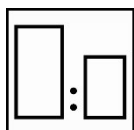
When performing a spot repair, prepare the following wet bed and intermediate coat mixtures. Refer to the *Repair Process Diagram* section below.



BY VOLUME
STICK # 1

Mix	Wet bed mixture:
100	Parts MM 05
50	Parts Lesonal Reducer

Note: A smooth, flat surface is mandatory to ensure even orientation of the midcoat.



BY VOLUME
STICK # 1

Mix	Groundcoat transition (intermediate) coat mixture:
100	Parts of groundcoat formula (reduced)
50	Parts of wet bed mixture (reduced)

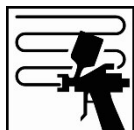


Spray-Gun Set-Up

- 1.3mm HVLP Gravity
- 1.2 – 1.3mm Compliant Gravity

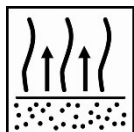
Application Air Pressure:

- HVLP – 10 psi (<0.7 bar) at air cap, maximum.
- Consult manufacturer specifications.



- Apply wet bed mixture as a smooth, closed coat.
- Immediately follow the wet bed coat with the intermediate coat mixture before the wet bed coat has dried.

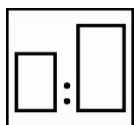
Note: Ensure a smooth transition from the groundcoat color to the OEM color.



- The groundcoat application layers must be flashed until completely dry before midcoat application

Midcoat Mixing and Application

NOTE: Adding reducer to the midcoat formula by weight is recommended.



BY WEIGHT (recommended)		BY VOLUME	
10 g	51K layer 2 formula (midcoat)	1 part	51K layer 2 formula (midcoat)
200 g	Lesonal Reducer	20 parts	Lesonal Reducer

Spray-Gun Set-Up

- 1.2 – 1.3mm Compliant Gravity

Application Air Pressure:

- Consult manufacturer specifications



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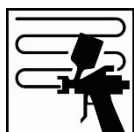
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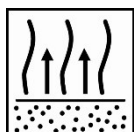


Fine atomization is required for the midcoat color.

- Adjust fluid needle from fully closed to approximately two turns open to achieve optimal atomization for this particular color.
- The midcoat should be applied as a mist (orientation-type) coat in thin layers with increased distance from the panel.
- Overapplication of the midcoat will result in mottling/clouding.

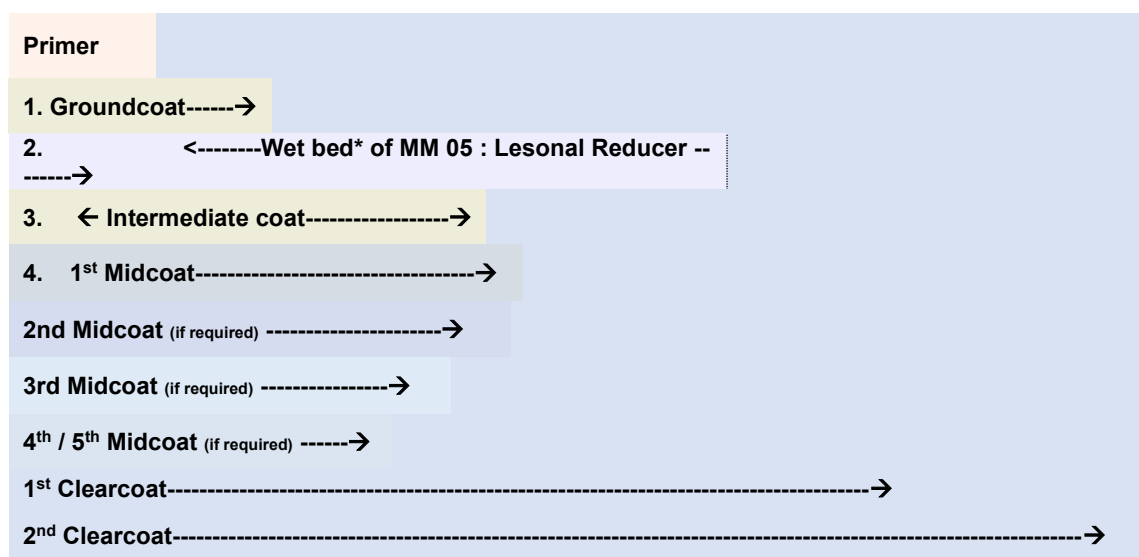


- After adjusting the spray gun according to the recommendations above, apply single layers of midcoat until the desired color is achieved. Thoroughly and completely flash-off each coat before applying the next.
- Check for the correct color match using the uncleared portion of the predetermined sprayout panel.
- The midcoat should be applied as a mist (orientation-type) coat in thin layers with increased distance. It is critical to use the same application on the repair as was used when creating the sprayouts.



- Flash-off until completely dry after each coat and before clearcoat application.
- After the midcoat is fully flashed, allow an additional 10 minutes before applying clearcoat.

Repair Process Diagram



- Diagram description on next page -

**Basecoat SB Repair Process
Mazda 51K Rhodium White Premium**

1. Apply groundcoat creating a smooth blend/transition from hiding to transparent into the OEM color.
2. Apply a wet bed / pre-coat to create a smooth and flat surface for the intermediate coat.
3. For a smoother color transition, apply the intermediate coat over the edge of the groundcoat to the OEM color. **Do not allow the wet bed to dry; apply into the wet bed to ensure good flow.*
4. The first midcoat layer is to be applied with an overlapping of the intermediate coat.
 - Subsequent layers (if required) should be applied inside the first layer of midcoat.
 - Midcoats should be applied as a mist (orientation-type) coat thin layers with increased distance.
 - Flash-off between coats and allow extra flash time before clearcoat.
 - Use an appropriate tack rag to remove any overspray before clearcoat application.

Clearcoat

- To ensure compliance with VOC regulations, Mazda 51K color formulas must be clearcoated with a Lesonal low VOC clearcoat.
 - Apply clearcoat according to the TDS for the clearcoat being used.
 - Avoid applying the first coat of clear too heavily.

Points to Consider

- Mix and apply layer 1 (groundcoat) as a normal solid Basecoat SB color.
- Ensure to have a smooth and gradual blend of layer 1 into the original color.
- The layer 2 (midcoat color) has a different mixing ratio than layer 1 - mixing by weight is recommended.
- Do not apply the midcoat too wet. Apply thin (mist-coat) layers and leave to flash-off between layers and before clearcoat. Use the recommended gun setup/adjustment.
- Application technique and skills can vary by painter. Ensure the sprayouts are sprayed by the same painter that will spray the repair.
- Apply the midcoat in a consistent and even manner while using increased distance to avoid applying too wet.
- Always tack the surface before clearing and do not overapply the clearcoat.



North America

Technical Service Bulletin (TSB)

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FOR PROFESSIONAL USE WITH SUITABLE HSE EQUIPMENT

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Read complete product TDS for detailed information.

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