



Repair System for Aluminum Parts - Regulated Areas



GENERAL

DESCRIPTION

Outlines aluminum repair procedure to address the growing number of aluminum parts needing repair or replacement in regulated areas.

The products referenced herein may not be available for sale in your market. Please consult your distributor for product availability.



MIXING

Refer to the TDS of the respective Permasolid® Surfacer and/or Priomat® Primer.



APPLICATION

SUBSTRATES

ALUMINUM

- When working with aluminum components, use separate, dedicated tools and abrasives to prevent cross contamination with other metals and alloys.
- OEM requirements for aluminum structural and repair processes should be followed closely.
- Exposed, abraded aluminum must be primed within one hour to prevent oxidation, which may lead to adhesion or corrosion failure.

SURFACE PREPARATION

- Degrease and sand.
- Abrade the surface with sandpaper no coarser than P80, then featheredge the repair with P180 to P240, and finish sand all surrounding areas with P320.
- Use dry, clean compressed air to remove debris from repair area.
- Before further treatment, clean all substrates thoroughly with Permaloid® Silicone Removers 7087 or 7010 Slow, Permahyd® Silicone Remover 7085, or Permahyd® Silicone Remover 7096. Do not allow cleaner to dry on the surface prior to wiping dry with a clean cloth.

ALUMINIUM REPAIR PROCESS

For Best Results When Repairing Aluminum with Body Filler

- When using body filler for aluminum repairs, apply 1-2 coats of Permasolid® 2.1 EP Primer Surfacer 4502 Gray to the aluminum substrate as per the TDS (Can apply up to 2 coats (2.0 - 2.2 mils)).



- Force dry 30 minutes at 140°F/60°C for an approximate film thickness of 1.5 mil or air dry 16 hours at 68°F/20°C.
- Sand with P400-800, remove debris using clean, dry, compressed air, and then clean the surface properly using the compliant cleaning system for the local area.
- Apply body filler to the thoroughly dried and sanded Permasolid® 2.1 EP Primer Surfacer 4502 Gray.
- Properly abrade body filler and finish sand with P180 – P240.
- For any cut-through areas to bare aluminum:

Option 1:

- Re-apply Permasolid® 2.1 EP Primer Surfacer 4502 Gray using a 1-2 coats application as per the TDS (Can apply up to 2 coats (2.0 - 2.2 mils)).
- Force dry 30 minutes at 140°F/60°C for an approximate film thickness of 1.5 mil or air dry 16 hours at 68°F/20°C.
- Scuff sand thoroughly with P320 – P500 for adhesion, remove debris using clean, dry, compressed air, and then clean the surface properly using the compliant cleaning system for the local area.

Option 2:

- Apply 1.5 to 2 coats of Priomat® 5.5 Wash Primer 4055 Gray as per the TDS.
- Air dry Priomat® 5.5 Wash Primer 4055 Gray 30 minutes at 68°F/20°C.
- Apply Spies Hecker® Permasolid® Surfacer to repair area using the “out-side-in” technique. Allow proper flash time between coats.
- Select the proper shade of Spies Hecker® Permasolid® Surfacer dependent on topcoat color required. If necessary, Permasolid® 2.1 EP Primer Surfacer 4502 Gray may also be used as a filling surfacer for low to medium builds of 2.0 to 2.2 mil with up to 2 coats.
- Refer to the Permahyd® Hi-TEC Base Coat TDS, for surface prep instructions.

For Best Results When Repairing Aluminum without Body Filler

- Apply 1.5 to 2 coats of Priomat® 5.5 Wash Primer 4055 Gray to the aluminum substrate as per the TDS. Air dry 25 minutes at 68°F/20°C.
- Apply a Spies Hecker® Permasolid® Surfacer to repair area using the “out-side-in” technique. Allow proper flash time between coats.
- Select the proper shade of Spies Hecker® Permasolid® Surfacer dependent on topcoat color required.
- Refer to the Permahyd® Hi-TEC Base Coat TDS, for surface prep instructions.

SPECIAL TIPS

1. Oxidation forms immediately on exposed aluminum. If exposed for more than one hour the aluminum must be re-abraded and re-cleaned before applying any primer system.



- Utilize separate repair work areas, tools, sandpaper, and vacuum systems to avoid cross contamination. Follow all OEM recommendations for bonding, riveting, or welding of aluminum. Do not grind or sand aluminum substrates with grits coarser than 80 grit.

Do not use Permasolid® 2.1 EP Primer Surfacer 4502 Gray on reversible substrates or Priomat® Primers.

VOC REGULATED AREAS

These directions refer to the use of products which may be restricted or require special mixing instructions in VOC regulated areas. Follow mixing usage and recommendations in the VOC Compliant Products Chart for your area.

SAFETY AND HANDLING

For industrial use only by professional, trained painters. Not for sale to or use by the general public. Before using, read and follow all label and MSDS precautions. If mixed with other components, mixture will have hazards of all components.

Ready to use paint materials containing isocyanates can cause irritation of the respiratory organs and hypersensitive reactions. Asthma sufferers, those with allergies and anyone with a history of respiratory complaints must not be asked to work with products containing isocyanates.

Do not sand, flame cut, braze or weld dry coating without a NIOSH approved air purifying respirator with particulate filters or appropriate ventilation, and gloves.

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