

Surface Cleaning Recommendations and Best Practices

Surface cleaning is a critical first step in the refinish process. Failure to remove contaminants is one of the most common causes of paint defects. Proper cleaning and preparation of the surface to be painted provides for a robust paint system and a superior final appearance. Other benefits include paint material savings, increased productivity, and elevated customer satisfaction. This TSB outlines the best practices for properly removing contaminants and coatings that are detrimental to the refinish process.



Points to Consider

- VOC regulated markets may limit the use of solvent-based surface cleaners. Always follow the regulations for the area in which products are used.*
- Surface contaminants are commonly classified as solvent-soluble or water-soluble and are most effectively removed by using the appropriate cleaner for the type of contamination.
- Incomplete removal of surface contamination may result in paint defects or failure of the applied paint system.
- To ensure the most effective removal of surface contaminants, it is advised to use both solvent and water-based cleaners.

*In Canada, solvent-based surface cleaners are only approved for cleaning automotive refinish surfaces when dispensed using a hand-held spray bottle *prior* to sanding.



Safety Considerations

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



Pre-Cleaning

- Wash the area to be repaired with soap and water.
- Fully rinse with clean water and then dry with a clean cloth.



Two-Towel Method for Surface Cleaning

- The two-towel cleaning method uses clean, lint-free towels.
- With the 1st towel, wet the surface and scrub to loosen and solvate contamination.
- With the 2nd towel, wipe to dry until the surface is completely dry.

NOTE:

- ✓ Never allow the cleaner to evaporate on the surface. If this occurs, rewet and reclean the affected area, making certain to completely dry.
- ✓ Always use a fresh towel for washing down and a fresh towel for wiping dry.
- ✓ Replace towels often to ensure the contaminants removed are not spread to other areas of the repair.

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Suitable Substrates for Surface Cleaners



Solvent-Based Cleaners (e.g., M600)

- Metals
- Sanded primer surfacers on metals
- Painted metal surfaces

Water-Based and Antistatic Cleaners

- Plastics
- Fiberglass or composites
- Metals
- Stable existing finishes including primers

Surface Cleaning – Prior to Sanding



- It is important to always clean the surface to be repaired before sanding or deglossing. Failure to do so could force contaminants into the paint film and increase the risk of paint defects.

- **Step #1** – Water-based cleaner (e.g., Autoprep Ultraprep)
 - Use the two-towel cleaning method incorporating clean, lint-free towels.
 - Dry thoroughly until no cleaner remains on the surface.
- **Step #2** – Solvent-based cleaner (e.g., M600, Antistatic)
 - Use the two-towel cleaning method incorporating clean, lint-free towels.
 - Dry thoroughly until no cleaner remains on the surface.

NOTE:

- Bare plastic parts cleaned with Antistatic must be air dried for 20-30 minutes before painting.
 - This allows any cleaner that was absorbed by the plastic to dissipate before painting.
 - Failure to air dry bare plastic after hand drying can result in poor adhesion to the part.
- Due to the potential for flash fire, M600 and other similar “wax and grease remover” type cleaners should not be used on plastic, fiberglass, composites, or other non-conductive substrates. These substrates require the use of an antistatic or water-based surface cleaner.



- Always check the reversibility of primed surfaces before using solvent-based cleaners, particularly when using aggressive cleaners such as Antistatic. If the primer is reversible, use a water-based cleaner such as Autoprep Ultraprep, or remove the primer to bare substrate.
- Protect your hands and the work surface by using solvent resistant gloves and never touch a cleaned surface with bare hands, as the transfer of hand oils and salts may cause paint defects.
- Be aware that evaporation of solvent cleaners may cause condensation to form on the surface. Ensure that any moisture on the surface has fully evaporated before painting.
- For additional details regarding the surface cleaning process or the products used, refer to the relevant AkzoNobel product TDS.



Attention: “Ceramic” Protective Coatings

- “Ceramic” protective nano-coatings that have been applied to the painted surface are an additional consideration when following the cleaning process prior to sanding.
- Closely evaluate the wetting characteristics of the water-based and solvent-based surface cleaners when applied. Uncharacteristic “beading” and a very “slippery” low-friction feel may provide evidence that a “ceramic” protection has been applied to the finish.
- If there is concern that this type of coating may be present, follow the procedure described in the *Ceramic Coatings* section below.



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Final Cleaning – Prior to Painting



- After any required sanding and masking operations have been completed, a final surface cleaning procedure should be performed before painting:
 - Repeat the surface cleaning process steps as described above.
 - In the paint booth, a final two-towel cleaning using Sikkens M200 or M25 Surface Cleaner is the recommended surface cleaning last step. These specialized cleaners are designed to remove any residual contaminants providing a clean, streak-free surface.
 - Do not leave cleaned surfaces exposed for an extended time before painting.
 - Blow off the repair and tack off the surface with a premium tack cloth before painting.

Ceramic Coatings



Description

- “Ceramic” coatings are designed for application to surfaces to assist in reducing the work required for maintaining and protecting the appearance of the object on which it is applied. This product results in a hydrophobic and selectively chemical resistant nano-coating that is bonded to the surface of the object.
- These coatings typically exhibit a high level of resistance to removal when using standard surface cleaning chemicals and techniques and are often best removed through a mechanical buffing procedure before continuing with the recommended surface cleaning methods for repairing and refinishing.



Identification

- The simplest way to identify if a “ceramic” type coating is present may be to ask the vehicle owner.
- Another sign that this coating may be present – during the initial surface cleaning process, wax and grease removers or water-based cleaners uncharacteristically “bead” on the surface when applied.



Removal Procedure

- Clean the surface with soap and water, then dry.
- Using a buffer fitted with a coarse cutting pad, buff the surface using an aggressive heavy-duty compound until the “ceramic” coating is removed.
- Ensure all of the coating is eliminated – pay special attention to the edges of the panel.
- If there are areas that cannot be accessed by buffing, hand-sanding with P600 – P1000 may be the best option.
- Carefully inspect the panel(s) to ensure the coating is completely removed from edge to edge.
- After verifying removal, follow the recommended surface cleaning procedures detailed in the *Surface Cleaning – Prior to Sanding* section of this bulletin before continuing with any sanding or prepping operations.

NOTE:

- ✓ Using a nylon scuff pad is not recommended for the removal of “ceramic” type coatings.
- ✓ Neglecting to completely remove the “ceramic” coating before refinishing carries a high risk of paint defects and/or paint system failure.

Detailed information on the use of AkzoNobel basecoats, clearcoats and other products can be found on the web at – <https://my.anaac.net/>