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Care & Maintenance Tips

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REPAINTING OF STEEL DOORS



Cleaning Supplies Needed:



Spic and Span®



Water



3M Synthetic Steel Wool Pad



Paint

Introduction:

The factory-applied finish on your metal entry door or garage door is a baked-on coating designed to give trouble-free performance for years, with little service required.

This brochure serves as a guide to maintaining the aesthetic and protective properties of the coating for the life of the door. It is important to read this brochure thoroughly and completely before attempting to clean, touch-up or repaint the steel door.

Repainting Of Steel Doors:

Should you feel the need to paint your steel door, or to repaint your finish-coated steel door, great care must be taken to prepare the factory-applied surface and to carefully assess the adhesion between this well-prepared surface and the coating to be used to repaint the door.

A. Surface Preparation

Any steel door surface to be repainted must be properly prepared to assure the continued performance of the coating system. The following four problem areas must be addressed before the repainting process can begin:

REPAINTING OF STEEL DOORS (CONT.)

1.) Dirt and Mildew

Dirt, loose chalk and mildew must be removed as recommended by the cleaning method outlined in the section, “Cleaning Painted Surfaces.” Heavier dirt accumulations, which must be addressed prior to repainting, may necessitate the use of a diluted solution of Spic and Span® (one cup into five gallons of warm water). NOTE: Detergent containing greater than 0.5% phosphate is recommended only as a preparation prior to repainting. Do not use such detergents for routine cleaning. Always rinse the surface thoroughly to remove any of the agents used in the cleaning procedure. Residual cleaners left on the surface will damage the adhesion of the newly applied paint system.

2.) Surface Imperfections

Minor scratches, which have not left the metal substrate exposed, can be lightly sanded or buffed to create a smoother surface. Care must be taken, however, not to expose the substrate. Once this exposed condition exists, the likelihood for rusting is greatly increased. Should the metal substrate be observed during this operation, see the following paragraph.

3.) Exposed Metal and Rust

Exposed metal minimum surface preparation is Hand Tool Cleaning per SSPC-SP2ⁱ and use of a primer specifically designed to protect any exposed galvanized steel metal from corrosion.¹ Care must be taken, however, not to destroy the galvanized surface. Before priming the metal steel door, test for adequate intercoat adhesion (see Section 2 of the Repainting section). Allow sufficient time for the primer to dry before applying the topcoat. For severely rusted steel doors the recommended preparation is

4.) Additional Surface Preparation Required for New Entry Doors

There may still be a layer of factory-applied wax on the surface of the steel door if it has been installed within the last two years. This material is used to protect the panels during fabrication and transit, and failure to remove this material will result in poor intercoat adhesion with resultant peeling or flaking of the new coating. To remove this wax, it will be necessary to lightly scuff the surface with a GRAY (not green) 3M Synthetic Steel Wool pad (equivalent to “000” steel wool) saturated with soapy water. A final wipe and rinse should be done with clean water only, to remove any loose dust or soap film. Once this procedure is completed, perform the adhesion test in Appendix A to assure that acceptable adhesion is evident. If poor adhesion is still observed, repeat step #4. It is imperative, of course, that the factory finish itself not be removed during this process. It is necessary to once again test the intercoat adhesion according to Appendix A. If the test results still indicate poor intercoat adhesion, DO NOT PROCEED! Contact your steel door supplier immediately.

B. REPAINTING

1.) Paint

After the door has been properly prepared, it must be coated within 24 hours. The recommended repaint material is a high-quality, 100% acrylic exterior latex house paint or latex maintenance finish. Alkyd modified acrylic latex and oil-based alkyd house paint must not be applied over factory-applied finishes. Before repainting the door, it is imperative that the intercoat adhesion be ascertained. See the following section.

REPAINTING OF STEEL DOORS (CONT.)

2.) Testing for Adequate Intercoat Adhesion

Only after the surface has been carefully prepared and the intercoat adhesion between the repaint material and the entry door is known to be acceptable should you proceed in repainting your steel door. Without sufficient intercoat adhesion, delamination after long-term exposure may be encountered (see Appendix A, which describes a method to ascertain the intercoat adhesion properties). NOTE: It is the sole responsibility of the person doing the repainting to ascertain if acceptable intercoat adhesion is being achieved.

3.) Mixing and Reduction

The paint must be thoroughly mixed before using. Mechanical mixing is recommended to assure that no settling remains on the bottom of the container. Follow the manufacturer's recommendation to reduce the material for spray.

4.) Application

The surface must be completely dry prior to painting. Painting should not be done in the early morning. Avoid painting at temperatures below 50° F (10° C). Apply a uniform coat at the manufacturer's recommended dry film thickness.

APPENDIX A

EVALUATING INTERCOAT ADHESION

- 1.) After properly cleaning the surface to be repainted, repaint a 4" x 4" area with the repaint material according to the manufacturer's instruction. Allow to completely dry before proceeding.
- 2.) Use a utility knife to cut a two-inch "X" into the repaint coating.

- 3.) Place a three-inch strip of Scotch® 610 tape over the "X" and rub 10 times with heavy pressure leaving a half-inch of tape free for removal.
- 4.) Pull the tape back over itself at a right angle.
- 5.) Examine the tape and the entry door panel for any signs of paint removal.

IF THE TAPE REMOVES MORE THAN 1/16" OF THE REPAINT MATERIAL FROM THE "X" CUT, THE INTERCOAT ADHESION IS INADEQUATE.

¹Akzo Nobel's Water-Based Epoxy Maintenance Coat, WA9C32800/GW9C32796 or equivalent primer designed for adhesion to galvanized steel.

ⁱⁱSSPC-SP7 - Brush-Off Blast Cleaning. A Brush-Off Blast Cleaned surface when examined without magnification shall be free of all visible oil, grease, dirt, dust, loose mill scale, loose rust, and loose paint. Tightly adherent mill scale, rust, and paint may remain on the surface. Mill scale, rust, and coating are considered adherent if they cannot be removed by lifting with a dull putty knife. Before blast cleaning, visible deposits of oil or grease shall be removed by any of the methods specified in SSPC-SP1 or other agreed upon methods. For complete instructions, refer to Joint Surface Preparation Standard SSPC-SP7/NACE NO. 4.

ⁱSSPC-SP2 – Hand Tool Cleaning. Hand Tool Cleaning removes all loose mill scale, loose rust and other detrimental foreign matter. It is not intended that adherent mill scale, rust, and paint be removed by this process. Mill scale, rust and paint are considered adherent if they cannot be removed by lifting with a dull putty knife. Before hand tool cleaning, remove visible oil, grease, soluble welding residues, and salts by the methods outlined in SSPC-SP1iii. For complete instructions, refer to Steel Structures Paint Council Surface Preparation Specification No. 2.

ⁱⁱⁱSSPC-SP1 – Solvent Cleaning. Solvent Cleaning is a method for removing all visible oil, grease, soil, drawing and cutting compounds, and other soluble contaminants. Solvent cleaning does not remove rust or mill scale. Change rags and cleaning solution frequently so that deposits of oil and grease are not spread over additional areas in the cleaning process. Be sure to allow adequate ventilation. For complete instructions, refer to Steel Structures Paint Council Surface Preparation Specification No. 1.