

TRINAR® AQUA 2K

Two component water-based air-dry fluoropolymer system



Application guidelines for TRINAR AQUA 2K, which is for use over primed metal, prepainted metal substrates, fiberglass, and some plastic substrates.

For professional use only.

These guidelines are offered as a method to optimize the performance of the TRINAR AQUA 2K repaint finish. TRINAR AQUA 2K coating system is used both for touch-up and also for painting materials that will not tolerate the elevated bake temperatures required of Spray or Coil coated TRINAR. The coating is comprised of a fluoropolymer-acrylic resin system and catalyst, intended for use as a two-coat material.

TRINAR AQUA 2K is not designed to be used as a one-coat over bare metal, or on non-metal substrates such as wood or glass. TRINAR AQUA 2K coating is not recommended for application to masonry, PVC, concrete block, wood and certain plastics.

Surface preparation for bare metal substrates

Bare iron and steel: Minimum surface preparation is Hand Tool Cleaning per SSPC-SP2¹. Remove all oils and grease from the surface by Solvent Cleaning per SSPC-SP1³ and apply a primer specifically designed to protect metal substrate from corrosion⁴. Test for adequate adhesion per Appendix A.

Aluminum: Because of the variety of aluminium compositions and treatments (e.g., alodine and anodizing) available, users must test for adhesion on their substrate before using. See Appendix A. The surface must be prepared by sanding with GRAY (not green) 3M Synthetic Steel Wool pad or 220-grit sandpaper. Wipe with clean solvent, using xylene, toluene, M.I.B.K. or M.E.K. If the surface is polished or anodized it must be scuffed until rough to assure adhesion. If the surface has been properly treated with a chrome conversion pretreatment sanding is not required.

GRIP-GARD® Washprimer 1K CF is recommended when coating over cleaned and properly prepared aluminium. This requires 0.40 ± 0.10 mils dry film thickness that must be a smooth and continuous film. This two-component system requires a 2:1 mix with GRIP-GARD Washprimer Reducer, (CFEXP02697). This primer must be top coated after 15 minutes and before 24 hours after the application of the primer. See GRIP-GARD Washprimer 1K CF guide for additional information.

TRINAR AQUA application guidelines

Surface preparation for pre-painted metal substrates

Before priming your factory-finished panels, great care must be taken to prepare the surface to be painted and to carefully assess the adhesion of this Akzo Nobel coating. The following four problem areas must be addressed before the repainting process can begin:

1.) Dirt and mildew

Dirt, loose chalk and mildew must be removed before repainting can begin. Mild solutions of biodegradable cleaner or household ammonia will aid in the removal of most dirt, and the following are recommended levels:

- a.) One cup of Simple Green®, or other common non-toxic biodegradable cleaners, which contain less than 0.5% phosphate, dissolved into two gallons of warm water. NOTE: The use of detergents containing greater than 0.5% phosphate is not recommended for use in general cleaning. Never blend cleansers or detergents with bleach.
- b.) One cup of household ammonia dissolved into five gallons of water (room temperature).

Use a well-soaked cloth, sponge, or brush (with very soft bristles). A low-pressure spray washer may also be used. We do not recommend the use of scouring powders or industrial solvents since these agents may damage the film. Solvent containing cleaners such as Fantastic®, however, are very effective and can be used without concern. If mildew or other fungal growth is a problem and cannot be removed as outlined above, household bleach mixed at a concentration of one cup of bleach to five gallons of water, along with one cup of mild soap (e.g. Ivory®) to aid wetting, is recommended.

Heavier dirt accumulations, which must be addressed prior to repainting, may necessitate the use of a dilute solution of Spic and Span® (1 cup into 5 gallons of warm water). NOTE: Detergent containing greater than 0.50% phosphate is recommended only as 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 metal 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-SP2¹ and use of a primer specifically designed to protect any exposed galvanized steel from corrosion. Care must be taken not to destroy the galvanized surface. Before priming the metal building panel, test for adequate intercoat adhesion (see Appendix A). Allow sufficient time for the primer to dry before applying the TRINAR AQUA 2K.

For severely rusted building panels the recommended preparation is SSPC-SP7² - Brush-Off Blast Cleaning. Akzo Nobel's Water-Based Epoxy Maintenance Coat⁴, or a maintenance primer designed for use on hot-dipped galvanized steel is recommended to protect the exposed metal from further rusting.

4.) Additional preparation required for new building panels

There may still be a layer of factory applied wax on the surface of the factory applied coating 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.

It is recommended that a tiecoat be used when coating over previously painted materials. The recommended tiecoat is Akzo Nobel's CVA0C31630, Gray Tiecoat. See the application guidelines, Gray Tiecoat CVA0C31630 / CUC0C31631 for complete instruction on use and application. 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, that the factory finish 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 builder immediately.

Surface preparation for small scratches and nicks

For the occurrences of small scratches or nicks in factory applied finishes the following is a recommendation for repairing. Sealing the damage area will prolong the life of the factory applied coating by preventing the moisture and environmental contaminants from reaching the metal substrate.

The areas to be touched up must be lightly scuffed to promote good adhesion of the TRINAR AQUA 2K finish. A fine grit sandpaper of at least 220 grit is recommended. Lightly scuff the area and wipe with a clean

cloth to remove any dust or environmental contamination. A small, fine brush can be used to apply the TRINAR AQUA 2K to the damaged area. Blend in the coating with the surrounding area. For small scratches and nicks, the TRINAR AQUA 2K can be used without the addition of the catalyst. This will extend the air dry time.

TRINAR AQUA 2K preparation

Mix coating thoroughly before using. A mechanical mixer should be used. Improper mixing (such as hand mixing or stirring with a stick or spatula) may lead to improper color and gloss. If reduction is required for spray application, approximately one gallon of TRINAR AQUA 2K and CATALYST can be reduced with 8 ounces of distilled water, more reduction will change the rheology of the coating and change the flow characteristics. For brush or roller application, reduction is generally not needed. Please note however that this coating is not well suited for brush or roller application.

MIX RATIO: TRINAR AQUA 2K and CATALYST

MIX 14 parts by volume TRINAR AQUA 2K to 1 part by volume CUC3C54117, TRINAR AQUA Catalyst.

To achieve a uniform blend, we recommend that the catalyst be added to the TRINAR AQUA 2K under agitation. Mechanical mixing is recommended, sufficient mixing must occur for the catalyst to be activated.

TRINAR AQUA 2K application

After mixing thoroughly, the material has a **3 hour working potlife**. After 3 hours the condition of blended material will have changed sufficiently to cause application issue. Additional reduction with water will not offset the increase in viscosity without destroying the rheology profile of the coating.

For airless spray application, a 0.015 tip and 1,500 psi have been found to give a uniform wet film. Depending upon color and application conditions, two complete coats maybe required in order to achieve uniform color and gloss. Apply to a uniform dry film thickness of 1.2 mils.

For HVLP application, the mix coating maybe reduced with up to 8% distilled water by volume to reduce the viscosity. Further reduction will dramatically effect the rheology and may lead to runs and sags in the applied film.

Application precautions

Apply only when air, surface and product temperatures are above 60°F (13°C) and surface temperature is at least 5°F (3°C) above the dew point. Application temperatures below 60°F (13°C) will cause poor adhesion and lengthen the drying and curing time. Application temperatures above 95°F (35°C) may cause dry spray, uneven sheen appearance and poor adhesion. Do not apply to surfaces with temperatures of 100°F (38°C) or higher.

Perform no painting when the relative humidity is above 85% for 24 hours before, during and after paint application. Ambient and substrate temperatures must be maintained for 24 hours before, during and after paint application. Avoid exterior painting late in the day when dew or condensations are likely to form or when rain is threatening. During the early stages of drying, the coating is sensitive to rain, dew, high humidity and moisture condensation. Plan painting schedules to avoid these conditions during the first 24 hours of curing.

Recoat

TRINAR AQUA 2K is recoatable after approximately 4 hours. Apply all coats within one week.

Handling

Although it is not recommended, TRINAR AQUA 2K can be handled after 48 hours. However, full cure requires a minimum of two weeks to air-dry. A longer period of time may be required if the ambient temperatures are below 70°F (21°C). Because it is not fully cured (depending on ambient temperature) for approximately two weeks, any handling or packing of TRINAR AQUA 2K coated metal may result in damage to the film if done before being properly cured. As a final test, pencil hardness should be an F-2H per ASTM D 3363, to assure a full cure. Force drying can be used to shorten the cure time. A maximum of 180°F (82°C) is recommended.

Clean up

Use water or a water/butyl cellosolve blend to clean equipment.

U.S. EPA regulations

TRINAR AQUA 2K as supplied meets or exceeds the U.S. Environmental Protection Agency established limits for volatile organic compounds in extreme high durability architectural coatings.

V.O.C. limit

140 grams per liter (0.3 pounds per gallon).

Appendix A - evaluating intercoat adhesion

- 1.) After properly cleaning the surface to be repainted, paint a 4" x 4" area with the repaint material according to the manufacturer's instruction. Allow to dry completely 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 180° angle.
- 5.) Examine the tape and the building 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.

⁴ AkzoNobel's Water-Based Epoxy Maintenance Coat, CWA9C32800 / CGW9C32796 or equivalent primer designed for adhesion to galvanized steel.

¹ SSPC-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-SP1³. For complete instructions, refer to Steel Structures Paint Council Surface Preparation Specification No. 2.

² SSPC-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-SP1³ or other agreed upon methods. For complete instructions, refer to Joint Surface Preparation Standard SSPC-SP7/NACE NO. 4.

3 SSPC-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.

For more information, please contact:

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