

Recommended Surface Preparation

For PRO-SHIELD® conductive paints, sealants, and inks

This bulletin describes the recommended maximum adhesion procedure(s) for treating the surfaces of various substrates before applying Parker Chomerics PRO-SHIELD® products. Improperly prepared surfaces can result in reduced coating integrity and product life.

Many times, coating failures can be directly attributed to inadequate surface preparation, which affects how PRO-SHIELD® products adhere and perform. To ensure proper adhesion of PRO-SHIELD® to the substrate, please follow the general guidelines below.

Surface Material	PRO-SHIELD 7113 and 7118 Conductive Epoxy Based Resins
ABS	Not appropriate for this surface.
Acrylic	Not appropriate for this surface.
Alumina	Clean with methyl ethyl ketone (MEK), followed by toluene. Air dry. Then abrade with a 325 mesh carborundum/water slurry.
Aluminum	Clean with methyl ethyl ketone (MEK), followed by toluene. Air dry. Then, wet abrade composite panels with 180 – 220 grit abrasive sheet to completely remove the gloss from surface of panel. Rinse with deionized water and check for water break free surface. Water break free is defined as supporting an unbroken film of water with no formation of discrete droplets for at least 30 seconds. Allow the water break free surface to air dry. Do not wipe or solvent wipe after achieving water break free surface. Apply primer or coating within 8 hours of surface preparation.
Beryllia	Clean with methyl ethyl ketone (MEK), followed by toluene. Air dry. Then abrade with a 325 mesh carborundum/water slurry.
Copper	Clean with methyl ethyl ketone, followed by toluene. Air dry. Roughen surface with 220 grit sandpaper. Then, wet abrade composite panels with 180 – 220 grit abrasive sheet to completely remove the gloss from surface of panel. Rinse with deionized water and check for water break free surface. Water break free is defined as supporting an unbroken film of water with no formation of discrete droplets for at least 30 seconds. Allow the water break free surface to air dry. Do not wipe or solvent wipe after achieving water break free surface. Apply primer or coating within 8 hours of surface preparation.
Epoxy Polyamide	Clean with methyl ethyl ketone, followed by toluene. Air dry. Vapor degrease and apply trichlorethylene.
Ferrite	Clean with methyl ethyl ketone, followed by toluene. Air dry. Roughen surface with 220 grit sandpaper.
Kovar	Clean with methyl ethyl ketone, followed by toluene. Air dry. Vapor degrease and apply trichlorethylene.
Nickel	Clean with methyl ethyl ketone, followed by toluene. Air dry. Degrease per procedure 1. Etch for 5 seconds in concentrated nitric acid (specific gravity 1.42).
Polycarbonate	Not appropriate for this surface.
Polyester	Clean with methyl ethyl ketone, followed by toluene. Air dry. Then, roughen surface with 220 grit sandpaper, and finally clean again with methyl ethyl ketone, followed by toluene.
Polyethylene	Clean with methyl ethyl ketone, followed by toluene. Air dry. Then, flame treat with an oxidizing flame.
Polyimide	Clean with methyl ethyl ketone, followed by toluene. Air dry.
Polysulfone	Clean with methyl ethyl ketone, followed by toluene. Air dry. Roughen surface with 220 grit sandpaper.
Polytetrafluoroethylene	Clean with methyl ethyl ketone, followed by toluene. Air dry. Then, sodium etch prior to bonding.
Polyurethane conformal coating	Clean with IPA (isopropyl alcohol), wipe, and air dry.
Silicon (metal)	Clean with methyl ethyl ketone, followed by toluene. Air dry.
Silicone rubber	Not appropriate for this surface.
Silver	Clean with methyl ethyl ketone, followed by toluene. Air dry. Roughen surface with 220 grit sandpaper.
Solder	Clean with methyl ethyl ketone, followed by toluene. Air dry. Roughen surface with 220 grit sandpaper.
Stainless steel	Vapor degrease and apply trichlorethylene.
Tin	Clean with methyl ethyl ketone, followed by toluene. Air dry. Roughen surface with 220 grit sandpaper.
Zinc	Clean with methyl ethyl ketone, followed by toluene. Air dry. Roughen surface with 220 grit sandpaper.

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Polycarbonate	Not appropriate for this surface.
Polyester	Clean with methyl ethyl ketone, followed by toluene. Air dry. Then, roughen surface with 220 grit sandpaper, and finally clean again with methyl ethyl ketone, followed by toluene.
Polyethylene	Clean with methyl ethyl ketone, followed by toluene. Air dry. Then, flame treat with an oxidizing flame.
Polyimide	Clean with methyl ethyl ketone, followed by toluene. Air dry.
Polysulfone	Clean with methyl ethyl ketone, followed by toluene. Air dry. Roughen surface with 220 grit sandpaper.
Polytetrafluoroethylene	Clean with methyl ethyl ketone, followed by toluene. Air dry. Then, sodium etch prior to bonding.
Polyurethane conformal coating	Clean with IPA (isopropyl alcohol), wipe, and air dry.
Silicon (metal)	Clean with methyl ethyl ketone, followed by toluene. Air dry.
Silicone rubber	Not appropriate for this surface.
Silver	Clean with methyl ethyl ketone, followed by toluene. Air dry. Roughen surface with 220 grit sandpaper.
Solder	Clean with methyl ethyl ketone, followed by toluene. Air dry. Roughen surface with 220 grit sandpaper.
Stainless steel	Vapor degrease and apply trichlorethylene.
Tin	Clean with methyl ethyl ketone, followed by toluene. Air dry. Roughen surface with 220 grit sandpaper.
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Surface Material	PRO-SHIELD 7100, 7103, 7108 Acrylic Based Resins
ABS	Clean with IPA (isopropyl alcohol), wipe, and air dry.
Acrylic	Clean with IPA (isopropyl alcohol), wipe, and air dry.
Alumina	Clean with methyl ethyl ketone, followed by toluene. Air dry.
Aluminum	N/A
Beryllia	Clean with methyl ethyl ketone, followed by toluene. Air dry.
Copper	N/A
Epoxy Polyamide	Clean with methyl ethyl ketone, followed by toluene. Air dry.
Ferrite	N/A
Kovar	N/A
Nickel	N/A
Polycarbonate	Clean with soap and water, and rinse well.
Polyester	Not appropriate for this surface
Polyethylene	Clean with methyl ethyl ketone, followed by toluene. Air dry. Then, flame treat with an oxidizing flame.
Polyimide	Not appropriate for this surface
Polysulfone	Clean with methyl ethyl ketone, followed by toluene. Air dry. Roughen surface with 220 grit sandpaper.
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Silicon (metal)	N/A
Silicone rubber	Not appropriate for this surface
Silver	N/A
Solder	N/A
Stainless steel	N/A
Tin	N/A
Zinc	N/A

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Parker Chomerics PRO-SHIELD Surface Preparation July 2018



ENGINEERING YOUR SUCCESS.