



MicroShield OC-1500 On-Contact Stencil Coating

INTRODUCTION

MicroShield is a revolutionary **on-contact** hydrophobic and oleophobic permanent coating technology that can be applied to solder paste stencils to impart a unique range of properties, including; better paste release, improved paste deposit profile, significantly reduced cleaning frequency and reduced bridging. MicroShield is easy to apply and instantly improves the surface.

ATTRIBUTES

- Instant surface modification
- Outstanding Hydrophobic and Oleophobic Properties
- Imparts "Easy-To-Clean" Property
- Abrasion resistance
- Conforms to surface
- Clear

TECHNOLOGY

MicroShield coating is based on FCT's revolutionary **on-contact surface modification technology**. The advanced chemistry chemically bonds to the surface while forming a hydrophobic/oleophobic nano-layer at the air interface. MicroShield has a robust, abrasion resistant surface that stands up to repeated cleaning.

PACKAGING

MicroShield is packaged in a a multi-use kit including; 250 mL MicroShield coating in an easy-to-use dosing bottle, 250 ml of MicroShield Primer in a dispensing bottle and Microshield lint-free applicator cloths. The kit includes enough material to coat approximately 37 stencils.

PRIMER

Fold a MicroShield applicator cloth once in each direction to form a 4.5-inch pad. Apply .25oz/7ml of primer to the pad and scrub entire surface area of the stencil in a circular motion being sure to press firmly against the foil. Pay close attention to the areas around the apertures ensuring a thorough cleaning of the foil surface.

APPLICATION

Fold another MicroShield applicator cloth and apply .25oz/7ml of the MicroShield coating to the center of the folded applicator. Immediately apply to the surface of the stencil in a circular pattern at a vigorous pace. Pay close attention to the areas around the apertures. Continue until the cloth becomes dry.

BUFFING

After 2 minutes the surface should be buffed vigorously with a dry MicroShield applicator for 90 seconds to remove and residue that is left. Some stencils will take less time if only focusing on the area around the aperture. To aid in the buffing process an electric palm buffer can be used. Buffing with this method requires 90 seconds but will require less effort. Place an opened dry MicroShield applicator cloth on the foil and place the palm buffer on the cloth and lightly buff for the required time.

CURING

MicroShield coating does not "cure" as a traditional polymer coating. MicroShield will instantly transform the surface **on-contact**. Performance typically improves with time. With a thickness in the nanometer range any hardness measurements will be measuring the underlying metal surface.

TEST RESULTS

Physical Properties	Values
Appearance	Clear
Specific Gravity @ 23°C	0.80 g/cm ³
Viscosity @ 23°C	2.1 cP
Nonvolatile content	1%
Static contact angle, water	103 Degrees
Static contact angle, n-hexadecane	69 Degrees
Abrasion resistance, ASTM D2486, Isopropyl Alcohol	>2000
Abrasion resistance, ASTM D2486, IPA Based Flux	>2000
Pencil Hardness	N/A

ENVIRONMENTAL

See the SDS for more information.

