



PRODUCT DATA SHEET EVERSHIELD

STEWART SYSTEMS EVERSIELD

PRODUCT DESCRIPTION

STEWART SYSTEMS EVERSIELD is a two-component, ceramic clear coat/chemical treatment system designed for Original Equipment Manufacturers (OEM) to protect the substrate over which it is applied from corrosion and oxidation. EVERSIELD, when applied properly, will not yellow, chip, crack, or peel. If gouged or damaged, the finish will not experience creepage and is repairable. EVERSIELD is designed to coat surfaces that require and solvent resistant thin coating that can withstand temperatures of 2,000°F. EVERSIELD offers excellent coverage, durability, and corrosion protection as well as being a low VOC and EPA compliant coating. EVERSIELD is applied clear and will dry clear.

ENVIRONMENTAL ISSUES

STEWART SYSTEMS EVERSIELD is considered non-hazardous by EPA definitions and does not contain lead or chromates. The solid and semi-solid sludge produced in spraying and clean up can be dried and sent to a "Class B" landfill. Please follow local and state regulations in the proper use and disposal of this product.

CHARACTERISTICS

- Excellent hardness
- Excellent flexibility
- Excellent impact resistance
- Excellent adhesion, mar, and abrasion resistance
- Excellent heat tolerance (2000°F+ with no visible affects)
- Excellent chemical and solvent resistance
- Available in flat, satin or gloss finish
- Non-photo chemically reactive
- Application by spraying, dipping, wiping, or brushing
- Little to no irritating odor
- Water or solvent is used for clean-up
- Non-hazardous
- Air dry or force curing preferred
- Product life of 24 hours
- Catalyzed system is non-flammable
- No special safety equipment required



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USES

- Stainless Steel
- Steel
- Brass
- Aluminum
- Copper
- Welding Tips/Nozzles
- Galvanized Steel
- Plastics
- Plexiglas
- Clear coat for Paints
- Clear coat for Powder coating

AIR QUALITY DATA

- Free of lead and chromates
- VOC (Volatile Organic Compounds) 2.8 lb/gal; 336 gm/ltr when catalyzed

PHYSICAL DATA

- Liquid, clear
- Specific Gravity: >1
- Evaporation Rate: Slower than ether
- VOC: 2.8 lb/gal; 336 gm/ltr
- % Solid by weight: 25%
- % Solid by volume: 22%
- Weight per gallon: 8.34 lbs
- Flash Point: 150°F CC Part A
- Flash Point: 47¼F CC Part B

PERFORMANCE DATA

Recommended film thickness for test results on Stainless Steel is 0.1 mil.

1. Salt Spray: Excellent-Passed 500 hr test with no negative effects
2. UV Resistance: Excellent
3. Solvent Resistance: Excellent
4. Flexibility: Excellent
5. Theoretical Coverage at 0.1 mil: 3,573 ft² (1624 x 22% solids by volume)
6. Hardness: 6H-Excellent

SPECIFICATIONS

- METALS: Surface must be free of grease, oil, dirt, and other foreign matter. Oxidation material must be removed.
- PLASTICS: Surface must be free of grease, oil, dirt and other foreign matter.
- PAINTS: Surface must be free of grease, oil, dirt and other foreign matter.
- POWDER COATING: Surface must be free of grease, oil, dirt and other foreign matter.



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APPLICATION

Application is by spraying, dipping, or wiping. A very thin film is all that is required for average protection. The amount of coverage per gallon is dependent upon the applicator and the equipment used. For best results, product should be applied to preheated (120°F) substrate or heat cured for 10-20 minutes at 120°F. Regular air-drying is acceptable but cure times will be longer. Insure that proper protective clothing and equipment is used during application. Wear a NIOSH approved respirator and solvent resistance gloves.

Please call Stewart Systems technical support (888) 356-7659 for mixing, application instructions and tips.

CLEAN-UP

Use a solvent for cleanup. Insure that proper protective clothing and equipment is used during cleanup.

Stewart Systems EVERSIELD TEST PERFORMANCE DATA

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AIRCRAFT FINISHING SYSTEMS EVERSIELD is a two-component, ceramic clear coat/chemical treatment system designed for Original Equipment Manufacturers (OEM) to protect the substrate over which it is applied from corrosion and oxidation. EVERSIELD when applied properly, will not yellow, chip, crack, or peel. If gouged or damaged, the finish will not experience creepage and is repairable. EVERSIELD is designed to coat surfaces that require a durable, flexible, and solvent resistant thin coating that is heat tolerant. EVERSIELD offers excellent coverage, durability, and corrosion protection as well as being a low VOC and EPA compliant coating. EVERSIELD is applied clear and will dry clear.

TESTING

Test results were compiled from 4 different sources. Tests were performed applying Stewart Systems EVERSIELD on the following substrates: steel, aluminum, copper, and brass panels. The following test results were determined.

PERFORMANCE

- **HARDNESS** – Exceeds pencil harness test of 6H.
- **IMPACT RESISTANCE** – ASTM Standard D2749 with Gardener Variable Impact Tester with 16mm diameter ball. Exceeds 1.8J and 180 inch pounds reverse and direct.
- **FLEXIBILITY** – Bend through 180° around 1" diameter mandrel bare side of specimen in contact with the mandrel. Temperature was 23° (+/-2°) C. Bending time not to exceed 1 second. No cracking or peeling when examined with unaided eye.
- **ADHESION** – CGSB Standard 31-GP-O Method 7.3. No removal of coating.
- **SOLVENT RESISTANCE** – All panels passed 100 double rub with MEK, Acetone, and virgin lacquer.



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- **WATER RESISTANCE** – Half immerse test panel in distilled water at 20_i - 25_iC (68_i-77_iF) for 21 days. Removed and wiped with clean lint free cloth. Allow product to dry for 7 hours (less than 50% humidity). No wrinkling or blistering.
- **ACCELERATED WEATHERING** – 1000 hours in QUV weatherometer per ASTM Standard C23. No film degradation or yellowing. Loss of Gloss after 500 hours was <6% for all panels. Loss of Gloss after 1000 hours QUV was <10% for all panels. QUV test does not include salt spray testing.
- **SALT SPRAY** – Passed 500 hours test with no blistering, creepage, or film degradation. Test was performed on scribed aluminum panel with EverShield at 1/10th mil thickness.
- **HEAT TOLERANCE** – Product was heated to 2,000_iF with no softening, surface disintegration, wrinkling, blistering, or loss of adhesion.
- **PERFORMANCE AFTER ACCELERATED WEATHERING** – Repeat test on impact resistance and adhesion on panels subjected to accelerated weathering.
Impact Resistance – 100% of original value Adhesion – No removal of coating.