

## Technical Data Sheet (MS-1600 Addendum)

### MS-1600

#### Flexible Epoxy Intermediate Membrane or Pigmented Color Flake Base Coat

\*MIL-PRF-24667B Type III  
MIL-D-24613 Type II Class 1&2

\*Supercedes MIL-D-23003 &  
DOD-C-24667

#### Description

MS-1600 is a pigmented, two component, flexible epoxy coating designed to fill and level wood, metal or fiberglass decks prior to the application of MS-880G, Type III Comp G flexible Non-Slip, T-15 Broadcast Quartz or CF-100 Color Flake. MS-1600 is also approved as a flexible Color Flake base coat which acts as a flexible intermediate membrane and base color coat combined.

Fire retardant in the cured state, MS-1600 provides maximum adhesion, flexibility and wear resistance.

#### Recommended Uses

Leveling and protecting uneven surfaces. Protects substrates from moisture, suitable as a membrane or one step flexible pigmented Color Flake base coat decking system according to MIL-D-24613 Type II Class 2 and T-15 Broadcast Quartz flooring Type II Class 1.

#### Surface Preparation

Existing deck covering must be 100% removed. Surfaces to which MS-1600 are to be applied must be thoroughly cleaned of all foreign matter such as dirt, oil, grease, paint or rust scale before installation is begun.

#### **Metal Decks:**

Surface should be cleaned by grinding, blasting (NACE No. 2, SSPC-10 or Sa 2 1/2 -near white metal) or using a needle gun to expose a rough, clean, bright metal. Remove all loose particles by brushing, vacuuming, air hosing or similar method. Immediately after surface has been cleaned, apply one coat of an approved epoxy primer such as American Safety Technologies MS-7CZ, not to exceed 2.0 mils over the measured surface profile. Application of primer may be by short nap roller, brush or spray. Allow primer 7 hours drying time at 70°F before topcoating.

#### **Wood Decks:**

Remove any weathered or damaged wood to expose clean, solid deck. Smooth wood should be sanded to ensure proper mechanical bonding of MS-1600. Immediately after surface has been cleaned, apply one coat of BC-80. Bonding Coat at a spread rate of approximately 200 square feet/gallon, (6 mils WFT). Application of BC-80 may be by short nap roller, brush, or spray. Allow BC-80 4 hours drying time at 70°F before applying MS-1600 over the tacky surface.

#### **Fiberglass Decks:**

Roughen and clean fiberglass with coarse grit #30 Aluminum Oxide discs or a grinder. Blow dust from surface and wipe clean with alcohol. Prime with MS-7CZ. Epoxy-Polyamide primers at 6-8 mils WFT, allow 8-12 hours cure before top coating.

MS-1600 is available in an LV (low viscosity) version which may be used for areas which require self leveling. The MS-1600LV is ideal for leveling interior decks.

## **Application**

MS-1600 is designed to be applied over a primer (MS-7CZ and BC-80).

1. MS-1600 is a pigmented two-part coating consisting of a base material and a hardener.
2. Pre-mix base component. Make sure all settlement is lifted off the bottom of container and is uniformly dispersed in the material.
3. Pour entire contents of hardener can into base material. Mix hardener and base material with a mechanical mixer for approximately 3-5 minutes or until mixed material assumes a uniform color and appearance. Material can be immediately applied since induction time is not required.
4. Working pot life is approximately 1 hour at 70°F (21°C). Pot life is increased at lower temperatures and decreased at higher temperatures.
5. The applicator should obtain straight, even strokes to give the area a uniform appearance.
6. MS-1600 can be applied at ambient temperatures between 50°F and 90°F. Curing time will increase substantially below 50°F surface temperature. Application when surface temperature is above 120°F or below 50°F is not recommended. Avoid application during periods of high humidity.
7. MS-1600 can be applied by roller or notched trowel.

## **Application Techniques**

### **Roller:**

1. Use a 3/16" inch nap roller available from American Safety Technologies Inc.
2. Pour a "ribbon" of MS-1600 on the surface 2' to 4' long and approximately 1' to 2' wide. Roll material in slow straight strokes pulling material toward you with a moderate amount of pressure on roller handle and spread evenly.
3. Higher temperatures will shorten drying time and conversely, lower temperatures and high relative humidity will lengthen drying time. Exterior applications must be protected from rain at least 12 to 24 hours after application according to humidity. Protect from heavy or extended exposure to water, oil and chemicals prior to top coating.

### **Notched Trowel:**

1. Use a NAVSEA approved notched trowel.
2. Pour a "ribbon" of MS-1600 on the surface 2' to 4' long and approximately 1' to 2' wide. Spread material by pushing trowel forward.
3. Using an even stroke, pull the membrane toward the applicator at a 60° angle from the deck to the handle.  
Remove any excess membrane build-up from the squeegee prior to making second pass by hitting rubber insert on the deck.

When dry, broadcast vinyl flakes into wet SC-100 Seal Coat at the desired coverage.

### **Cove Base:**

If a cove base is required build the cove by adding Cab-O-Sil. Slowly add Cab-O-Sil into properly mixed MS-1600 until the material reaches the consistency to bond (hang) to a vertical surface. As you add the Cab-O-Sil occasionally test the consistency by troweling a small portion to the side of the mixing vessel. To determine the amount of material needed for the cove base, measure the linear feet and divide by the height of the cove. This will result in the square footage required.

### **SC-100 Seal Coat**

SC-100 Seal Coat is supplied in 1 /2 gallon kits. The two-part kit is pre-measured to correct ratio. Thoroughly mix part A and part B for 3-5 minutes with a slow speed electric drill and Jiffy ® Mixer type blade.

NOTE: Do not attempt to mix by hand. Improper mixing will result in improper cure "sticky" and/or soft spots.

The SC-100 Seal Coat has a working "pot life" of approximately 25-30 minutes at 70°F. The material should be stored overnight in a cool place (approximately 70°F) prior to mixing. The higher the temperature, the shorter the "pot life". Coverage will vary according to the amount of vinyl flakes used. Make sure to secure all pipes, faucets, and fittings that may be a potential moisture leak. Turn off air conditioner and secure vents that may cause a direct air draft on the surface. Epoxy resins and water do not mix. Make sure to keep moisture away from the new seal coat for at least 12 hours (at 70°F). Moisture will cause the seal coat to "blush"

white prior to drying. Using a short nap (no "fuzz") or sponge roller, re-seal with SC-100 Seal Coat. Along the base of the cove (or bulkhead), use a small, soft, paint brush to "cut in" areas where the roller will not reach. Make sure the brush leaves no bristles. Work quickly to avoid having material "set up" before being spread. Avoid thick and thin spots. SC-100 Seal Coat will show up as shiny and dull spots, when dry. Totally secure the area. Seal off door vents and other open spaces that may allow dust, trash, water and other contaminants to reach the wet sealer during dry time.

Allow to dry for minimum of 24 hours at 70°F (plus) before opening to light foot traffic and turning on air conditioning. Continue to protect from excessive moisture and standing water. Curing will continue for up to 6 days according to temperature and humidity. The longer the new material is allowed to cure (and stay dry), the better the performance of the new deck. If at all possible, do not put the space back into full service for at least 3-4 days.

After 24-36 hours at 70°F (plus), the area may be covered with heavy paper such as brown or white wrapping paper or other covering materials that allow the surface to "breathe". Some heavy covering materials such as plastic or plywood may slow the cure and/or trap moisture, causing the surface to become opaque or white. NOTE: Should the surface be exposed to water/moisture during cure time and "blush" white or be damaged in any other way, it may be necessary to sand and re-seal as per instructions above.

### **Daily Care & Maintenance**

Regular cleaning is most important for best performance and appearance. Clean daily or after the space is used. Dirt, sand, oil, grease, detergents, food, garbage and other contaminants will ground into the surface, scratching and staining the clear, glossy, sealed finish. Good "housekeeping" procedures will help to protect the important topcoat sealer (SC-100). Once the topcoat sealer is worn through, the MS-1600 flexible epoxy base coat beneath is more easily stained and damaged. Wash with warm water and a free rinsing detergent. Do not use harsh abrasive type cleaners. This type cleanser will only scratch and accelerate abrasion of the surface. Use only soft mops, rags, or squeegees. Hard objects and stiff bristle brooms or brushes will only scratch

the surface. They are not necessary for cleaning the epoxy surface. The less scratches in the surface; the easier to keep clean.

REMEMBER: Smooth and glossy will equal ease in cleaning. Never use solvents or paint strippers! A fine grain sandpaper (30-60 grit) should be used to totally remove the old SC-100, paint, wax, acrylics, or other stains. Re-seal with a thin coat of American Safety Technologies' SC-100 Seal Coat.

### **MS-1600 Specification**

#### **V.O.C.**

- 0.3 lbs. per gal.

**(39 grams/liter)**

#### **Volume Solids (%)**

- 97%

#### **Pot Life**

- 1 hour @ 70°F (21°C)

#### **Hard Dry**

- 7 hours @ 70°F (21°C)

#### **Hardness, Shore D**

- 50-60 @70°F (21°C)

#### **Estimated Coverage**

- 62.5 sq. ft. per 5 gal. kit  
(1/8" thickness - 125 mils)
- 125 sq. ft. per 5 gal. kit  
(1/16" thickness - 63 mils)

#### **Weight per Gallon**

- 12.3 lbs. per gal.

**(1.4 kg. / liter)**

#### **Packaging**

- 5 - gallon kit

#### **Standard Color**

**Dark Gray**

**For Additional Colors refer to CF-100 on American Safety's Decorative Decking Color Selection Chart**

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