

TECHNICAL DATA SHEET

MS-400L

HIGH SOLIDS NON-SLIP DECK COATING

MIL-PRF-24667B Type I, Comp L

Description

MS-400L is a high solids, two-part, non-slip deck coating designed to provide maximum wear and impact resistance for U.S. Navy CV/CVN carrier landing areas.

Fire retardant in the cured state, **MS-400L** is formulated with epoxy resins to give maximum adhesion to steel, toughness and corrosion resistance. It is resistant to fire and jet blast, most acids, alkalies, solvents, grease, oil, salt water, detergents, alcohol, gasoline, jet fuels, cellulube and other hydraulic fluids. Because of its tenacious bond, rust will not creep under the coating if fractured.

In accordance with NAVSEA guidance to non-skid systems, **MS-400L** is designed to be used in conjunction with the following ITW American Safety Technologies MIL-SPEC and NAVSEA approved products: MS-7C or MS-7CZ Primer and MS-200/MS-180 Color Toppings.

Surface Preparation

MS-400L can be applied to any clean, dry surface. All rust, mill scale, paint, dirt, grease, oil, etc. must be completely removed. Recommended methods of cleaning steel surfaces are as follows:

- Grit-blasting to SA 2.5 (near white metal) or SSPC-SP10, is the preferred method of cleaning and results in the best surface for adhesion.
- Where grit-blasting is not feasible, power tool cleaning utilizing power sanders fitted with #16 grit aluminum oxide sanding discs can produce a sufficiently clean surface provided cleaning is carefully and intensively done.
- If there is oil or grease on the surface, it must be removed prior to cleaning. The preferred method is to scrub with a strong detergent and flush area thoroughly while still wet. An alternative method is to remove the grease or oil with a solvent. Solvents are flammable and must be handled with care. It is important that the solvent not be allowed to evaporate during the cleaning process and redeposit grease or oil on the deck.

It is recommended that MS-7C or MS-7CZ Metal Primer be applied on metal surfaces immediately after the surface has been cleaned and before rust or oxidation has had a chance to form or surface becomes dirty or contaminated in any way.

Refer to the **MS-400L ASTM-F718** for detailed environmental limitations, surface preparation, mixing, and application instructions. Documents are available at: WWW.ITWAST.COM

Specifications

V.O.C.

- 1.0 lbs. per gal.
(121 grams/liter)

Volume Solids (%)

- 86%

Pot Life

- 2 hours @ 70°F (21°C)

Hard Dry

- 24 hours @70°F (21°C)

Cure Time

- 4 days @70°F (21°C)

Estimated Coverage

- 20-30 sq. ft. per gal. - rolled
- 18-22 sq. ft. per gal. - notched trowel

Weight per Gallon

- 16.0 lbs. per gal.
(1.92 kg./liter)

Flash Point

- 102°F (39°C)-CC

Coefficient of Friction

IAW MIL-SPEC

- Dry -0.97
- Wet -0.92

Packaging

- 5 gallons in 61/2 gal kit

Standard Color

- Dark Gray (36076)

HIGH AND ULTRA HIGH-PRESSURE WATER JETTING. Note: UHP-WJ does not create an anchor tooth profile. The substrate may require abrasive blasting in order to produce an acceptable minimum or specified anchor tooth profile prior to application of primer.

ALL SURFACES TO BE RECOATED SHALL BE CLEANED IN ACCORDANCE WITH NACE No.5/SSPC SP 12 WJ-2/NV-2.

WJ-2:A WJ-2 surface shall be cleaned to a matte (dull, mottled) finish which, when viewed without magnification, is free of all visible oil, grease, dirt, and rust except for randomly dispersed stains of rust, tightly adherent thin coatings, and other tightly adherent foreign matter. The staining or tightly adherent matter is limited to 5% of the surface.

NV-2: An NV-2 surface shall have less than 7 mg/cm² of chloride contaminants, less than 10 mg/cm² of soluble ferrous ion levels, or less than 17 mg/cm² of sulfate contaminants as verified by field or laboratory analysis using reliable, reproducible test equipment.

Mixing

1. **MS-400L** is designed to be applied over a primer.
2. **MS-400L** is a two-part coating consisting of a base material and a hardener.
3. Pre-mix base component. Make sure all settlement is lifted off the bottom of the container and is uniformly dispersed in the material.
4. Add entire contents of hardener bag 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.
5. Working pot life is approximately 2 hours at 70°F (21°C). Pot life is increased at lower temperatures and decreased at higher temperatures.
6. **MS-400L** can be applied at ambient temperatures between 40°F and 100°F. At below 50°F surface temperature, curing time will increase substantially. Application when surface temperature is above 120°F or below 40°F is not recommended. Avoid application during periods of high humidity.
7. **MS-400L** can be applied by roller or notched trowel.

Application Techniques

Roller

1. Use a phenolic roller available from American Safety Technologies. It is important that the rolled profile expose the maximum amount of non-slip aggregate. If aggregate is not properly exposed, the coating may become slippery when wet.
2. Pour a "ribbon" of **MS-400L** on the surface 2' to 3' long and approximately 4" to 6" wide. Roll material in one direction only, in slow straight strokes pulling material toward you with a moderate amount of pressure on roller handle. Do not over-roll too many times or press down too heavily. Be careful that material does not build up too thickly along welds (roll across welds, not along them). Material applied too thickly may not properly cure.
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 for 5 to 7 days during final cure.

Notched Trowel

1. Use a NAVSEA approved notched trowel.
2. Pour a "ribbon" of **MS-400L** on the surface 2' to 3' long and approximately 4" to 6" wide. Spread material by pushing trowel forward.
3. Using an even stroke, pull the non-skid toward the applicator at a 60° angle from the deck to the handle. Remove any excess skid build-up from the squeegee prior to making second pass by hitting rubber insert on the deck. When pouring non-skid for continuation of ridge profile, pour non-skid on top of end trail to avoid gaps or low spots.
4. The applicator should obtain straight, even strokes to give the area a uniform appearance.

Surface Maintenance

To maintain the non-slip, safety performance of **MS-400L**, we recommend periodic cleaning with an approved cleaner/degreaser in accordance with current military directives. Scrub surface with a longhandled, fiber bristled brush or floor machine. Rinse with clean water and dry.

Foreign matter such as chewing gum, should be removed with a scraper or putty knife and then cleaned as above.

Made in U.S.A.

CAUTION

Read Material Safety Data Sheet before using this material.

Contains epoxy resins. Catalyst contains Amines. Use only with adequate cross ventilation. Keep away from extreme heat, sparks and open flame. Avoid prolonged breathing of vapors. For dizziness, seek fresh air. Toxic material. Avoid contact with skin. Use gloves, goggles and coveralls. In case of spillage on clothing, change clothing to prevent prolonged contact with skin. Wash contaminated clothing before reuse. Discard contaminated shoes. In case of accidental contact with skin, wash immediately with soap and water. In case of eye contact, flush thoroughly with plenty of water and call physician. If swallowed accidentally, do not induce vomiting. Seek medical attention immediately.

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