

TECHNICAL DATA SHEET
MS-4100G LIGHTWEIGHT
DURABLE UV RESISTANT NON-CHALKING EPOXY
LOW SOLAR ABSORBING
HIGH SOLIDS NON-SLIP DECK COATING
MIL-PRF-24667B Comp G Type I & II

Patent No. 5,686,507

Contains KEVLAR® aramid*

Description (Formerly MS-400-100 G UV/LSA Lightweight)

MS-4100G LIGHTWEIGHT is a **durable lightweight** high solids, heavy duty, non-slip deck coating formulated with special epoxy resins and special polymer aggregates to give maximum adhesion on aircraft carrier flight decks and provide non-slip protection for aircraft, rolling equipment and personnel. Its lighter weight is **easier to apply and handle**, while helping to reduce ship weight. **30% lighter** when compared to traditional aluminum oxide aggregate Type I/II non-skid. Its high solids formulation is more environmentally friendly and reduces reporting requirements under NESHAP rules.

Fire retardant in the cured state, MS-4100G LIGHTWEIGHT is resistant to fire and jet blast, most acids, alkali's, 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.

Recommended Uses

Engineered for high durability MS-4100G LIGHTWEIGHT can be used in general use areas for all ships including CV/CVN. Its unique polymer aggregate formulation lasts longer while reducing weight.

MS-4100G LIGHTWEIGHT is designed to be used in conjunction with the following ITW American Safety Technologies MIL-SPEC and NAVSEA approved products: MS-7C and MS-7CZ Metal Primers, MS-200/MS-180 Color Toppings or MS-1600 flexible intermediate membrane

Surface Preparation

MS-4100G LIGHTWEIGHT 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 surface are as follows: Metal Decks: GRIT BLASTING

a. 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 for MS-7C or MS-7CZ primers.

b. Where grit-blasting is not feasible, power tool cleaning utilizing power sanders fitted with #16 or #30 grit aluminum oxide sanding discs can produce a sufficiently clean surface provided cleaning is carefully and intensively done.

c. If there is oil or grease on the surface, it must be removed prior to cleaning.

SPECIFICATIONS

V.O.C.

- < 0.2 lbs per gallon
(< 22 grams/ liter)

Solids by Weight

- 99-100%

Pot Life

- 2-4 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./gal.-roller
- 18-22 sq.ft./gal.-notched trowel

Weight per Gallon

- 13.4 lbs./gal.

Flash point

- > 200°F

Coefficient of Friction

- Dry – 1.10
- Wet – 1.05

Packaging

- 5 Gallons in 61/2 gal. kit

Standard Color

- Dark Gray (36076)

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.

HIGH AND ULTRA HIGH-PRESSURE WATER JETTING

ALL SURFACES TO BE RECOATED SHALL BE CLEANED IN ACCORDANCE WITH NACE/SSPC12/ WJ2/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 µg/cm² chloride contaminants, less than 10 µg/cm² of soluble ferrous ion levels, and less than 17 µg/cm² of sulfate contaminants as verified by field or laboratory analysis using reliable, reproducible test equipment.

It is recommended that MS-7C or MS-7CZ primer be applied on 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.

Mixing

Application over a primer is preferable. However, for temporary repairs MS-4100G LIGHTWEIGHT can be applied over existing primer, non-skid or bare metal.

1. MS-4100G LIGHTWEIGHT is a 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 the container and is uniformly dispersed in the material.
3. 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.
4. For optimum application properties and maximum profile the non-skid should be applied within 30-40 minutes of mixing. Pot life is increased at lower temperatures and decreased at higher temperatures.
5. MS-4100G LIGHTWEIGHT 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.

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.

The user of this product is responsible for making its own evaluation and tests regarding the capabilities, safety, utility, suitability and application of the product, and assumes all risks and liabilities resulting from the use or application of the product, whether used alone or with other products. American Safety Technologies (herein referenced to as the COMPANY) warrants only that the product conforms to the specifications contained in product Technical Data Sheets published by the COMPANY, a copy of which is available to the user. If the product fails to conform to this warranty, the user shall return the product within 10 days of the purchase date with a note specifying the defect and the COMPANY will either replace the product or at its option, return the purchase price. EXCEPT AS EXPRESSLY PROVIDED IN THIS PARAGRAPH, THE COMPANY MAKES NO REPRESENTATIONS OR WARRANTIES OF ANY KIND, NATURE OR DESCRIPTION, EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE, AND HEREBY DISCLAIMS THE SAME. In no event shall the COMPANY be liable to the user of this product, whether in contract or in tort or under any other legal theory (including, without limitation, negligence), for damages which exceed the purchase price of the product, or for any indirect, incidental, consequential or similar damages, arising out of sale, use or application of the product, or for any claim made against the user by any other party, even if American Safety Technologies has been advised of the possibility of such claim

Application Roller

1. Use a phenolic roller available from American Safety Technologies, Inc. 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-4100G LIGHTWEIGHT on the surface 2'-3' long and approximately 4"-6" wide. Roll material in one direction only, in 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 cure properly.

3. High temperatures will shorten drying time and conversely, lower temperatures and high relative humidity will lengthen drying time. Exterior applications must be protected from rain for 12-24 hours after application according to humidity. Protect from heavy or extended exposure to water, oil and chemicals for 5-7 days during final cure.

Notched Trowel

1. Use an approved NAVSEA notched trowel for military applications. Notches may be selected according to desired effect and texture intended.

2. Pour a "ribbon" of MS-4100 G LIGHTWEIGHT on the surface 2'-3' long and approximately 4"-6" wide. Spread material by pushing trowel.

3. Using an even stroke, pull the non-skid toward the applicator at a 60° degree angle from the deck to the handle. Remove any excess skid build-up from the trowel prior to making a second pass by hitting rubber insert on 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 supplier should obtain straight even strokes to give the area a uniform appearance.

Surface Maintenance

To maintain the non-slip, safety performance of MS-4100G LIGHTWEIGHT, we recommend periodic cleaning with an approved cleaner/degreaser in accordance with military directives. Scrub surface with a long-handled, fiber bristled brush or floor machine. Rinse with clean water and dry. Refer to the MS-4100G Lightweight ASTM-F718 for additional surface preparation, application, and environmental instructions, available: WWW.ITWAST.COM
Made in U.S.A. MS-4100G Lightweight 12-01-07
***Du Pont registered trademark for its aramid fiber**