Directions For Use

MK-102 : One Coat Polysiloxane-Epoxy Coating

Product Description: The coating material is a clear, extremely durable 2-part organometallic coating that cures at room temperature. The cured coating performs a water and oil repellent surface, greatly simplifying the removal of contamination.

Features include:

- Two-pack formulation.
- One-coat application with low coating thickness.
- Coatings have good mechanical properties and good adhesion.
- Easy-clean properties of the surface (water and oil repellent).
- Resistance to solvents, acids and bases
- Corrosion resistance on stainless steel, brass, aluminium and magnesium alloys.
- UV stable
- High gloss, satin and matt finish available
- Isocyanate and heavy metal free
- Environmentally friendly production process

For best results, proceed as described below:

1. Cleaning the surface

Coating performance is, in general, proportional to the degree of surface preparation. Prior to coating, surfaces must be clean, dry, undamaged and free of all contaminants including any salt deposits. It is also important to remove any waxes, silicones and surfactants, before coating.

2. Coating with MK-102

(i) Ambient considerations

The substrate temperature must be at least 10°C (and at least 3°C above dew point) during surface preparation, application and curing. Relative humidity should not exceed 75% during application and before the touch dry time.

(ii) Coating Processes Available

Airless spray – Standard equipment with a 0.38mm (0.015”) to 0.53mm (0.021”) fluid tip is recommended.
Conventional spray (HVLP) – Industrial equipment with 78 or 765 air cap and ‘E’ fluid tip, or Binks No. 18 or 62 gun with a 66 x 63 PB nozzle set-up. Separate air and fluid pressure regulators, mechanical pot agitator, a moisture and oil trap in the main air supply line are recommended. Changes in pressure, hose and tip size may be needed for proper spray characteristics.
Power mixer – Jiffy Mixer powered by an air or an explosion-proof electric motor may be necessary when mixing large volumes.
Brush – Natural bristle.
Roller – Use industrial high density foam rollers. Level any air bubbles with bristle brush.

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(iii) Application Procedure

A SMALL TEST PATCH (10 CM X 10 CM) MUST BE CARRIED OUT IN AN INCONSPICUOUS AREA BEFORE EACH AND EVERY JOB

a. Add Part B to Part A in a 1:1 (by weight ratio respectively). Mix thoroughly until uniformly blended. Allow stand for 15 minutes before use.

Pot Life (Hours) : 25°C (4.5 hours)
Drying time @ 40% R.H. (Hours) : 25°C (Touch : ~4 hours), (Through : ~8 hours), (Full Cure : 7 days)
Recoat time @ 40% R.H. (hours) : 25°C (4 hours)

b. Thinning is generally not necessary but if the applicator desires NK-M1 can be thinned up to 10% to assist in coating thickness and uniformity. Please consult Protective Coatings & Treatments Ltd for recommended thinning products.

c. If spraying flush equipment with thinner before use. Then apply a wet coat in even, parallel passes, overlap each pass 50% to avoid defects, bare areas and pin holes. Follow with a cross spray at right angles to first pass.

d. Care needs to be taken with brush and / or roll applications. It is important not to produce a coating that is too thick. Aim dry film thickness (DFT) is 5 - 10 µm on non-porous surfaces. While on primed and porous surfaces the coating thickness is between 5 – 15 µm. There will be some surface texture, which is typical for brush and roll applications.

e. Clean all equipment with thinner or MEK immediately after use.

(iv) Coverage : 50-70 sqm /L

3. Checking for coating efficiency (drop test)

Water on the coated surface should collect into droplets and should not spread out into a uniform film. This test can be conducted after the coating is dry through.

4. Retouching and Recoating

Prepare damaged areas to original surface preparation requirements. If re-painting is required it is important that the surface is sanded with wet sand paper (1500 – 2000 grit). This will enable paint to be applied of over the coating. Thoroughly remove dust or abrasive residue before touch up.

5. Disposal

Send in only completely empty packaging for recycling. Hand over packaging containing residues to a local collection centre. Dry residues can be disposed in accordance with dry paint residues or as domestic waste.

6. Read carefully

The information on this data sheet is based on the current status of technical development as well as our experience with the product. However, given the variety of surfaces and ambient conditions,

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the information provided on this data sheet shall in no way diminish the responsibility of the user to ensure with due care, that our product is suited for the intended purpose, surface and application conditions. Since application and processing lie outside our purview, no manufacturer liability shall be derived from the information provided herein. Our General Terms and Conditions of business shall apply in all cases. All information is subject to change without notice.

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