

GENERIC APPLICATION SPECIFICATION FOR THE APPLICATION OF ULTRASEAL SPRAY



SUBSTRATE: CONCRETE

1.0 Weather Conditions:

No coating shall be done when relative humidity exceeds 70%. The surface temperature must be greater than 3° C above dew point. The ambient temperature must be greater than 5° C. Environmental conditions shall be checked every 2 hours or if the weather condition changes.

2.0 Pre-preparations:

- Visual inspection must be done on concrete surface to check for porosity, exposed aggregate, protrusions, cracks, physical damage, or contaminants.
- Concrete surfaces must preferably be cured for a minimum of 28 days.

2.1 Pre-cleaning:

- Vacuum cleaning or air blast cleaning may be used to remove all loose dirt and dust and debris in accordance with ASTM D4258.
- If required, detergent water cleaning and steam cleaning may be used to remove oils and grease from the concrete.

3.0 Surface Preparation:

The preparation of concrete using certain mechanical methods:

- Hand or power tool cleaning
- Scarifying
- Abrasive cleaning
- Portable centrifugal blast cleaning
- High Pressure water cleaning

All existing coating and laitance must be removed.

3.1 Moisture Content:

Moisture levels preferably less than <7% Method to use:

- Plastic sheet method (ASTM 4263).
- Moisture meter electrode (ASTM F2170-02).

4.0 Cleanliness of Surface Prior to Application:

- No significant visual dust.
- Newly abraded profile is cleaned to a dust and debris ISO 8502-3 max rating 2.

5.0 Application of NuCote MT Primer:

Method of application:

- Brush
- Roller
- Squeegee (Back rolled with a roller)

Thinning: 10 – 30% Ultrasolve 900 - 003 (MEK) may be added for thinning

Pot life: ± 5 hours

Theoretical cons/m²: ± 0.4 Kg at 250 µm (excl Wastage)

Typical dry film thickness: 200 – 250 µm

Overcoating time:

- Min: 6 hours (Must be touch dry)
- Max: 24 hours @ 25° C

5.1 Application of Ultraseal Spray:

Method of application:

- Spray (High-Pressure 2000 psi Spray Machine at 45° C).
- Any suitable 1:1 Gear Pump Spray Machine OR Cartridge Gun

Mix ratio: 1:1Pbv

Theoretical cons/m²: ± 1.12 Kg at 1 mm (excl Wastage)

Typical dry film thickness: 1.5 – 3 mm

Overcoating:

- Max: 20 minutes @ 25° C

5.3 Application of NuCote UVC:

Method of application:

- Brush
- Roller
- Airless Spray

Mix ratio: 4:1 Pbv

Thinning: <10% by volume Ultrasolve 900-003 (MEK)

Pot life: 60 minutes at 25° C

Theoretical coverage/m²: 8 – 10 m²

Typical dry film thickness: 100 – 200 µm

Overcoating time:

- Min: 6 hours (Must be touch dry)

6.0 Required Surface Preparation If Overcoating Time Has Expired:

- A circular sand motion is recommended with medium pressure to crosscut the Polyurethane coating and break the substrate gloss. Linear high-speed sanding may leave the parent coating polished.
- Solvent wipe abraded area using Ultrasolve 900-003 (MEK) making sure the newly abraded profile is cleaned to a dust and debris ISO 8502-3 max rating 2.
- Wait for solvent, MEK to flash off. This will take ± 15 minutes at 25° C at 50% relative humidity.
- Brush apply 20µm of Bakkie Bond 520-003 and leave until “tacky”. This will take ± 2 hours at 50% RH and 25° C.
- Spray over Bakkie Bond 520-003 using Ultraseal Spray

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7.0 Inspection and Test Reports:

- Daily reports for humidity, temperature, dew point shall be recorded.
- Dust and debris reports.
- Dry film thickness measurements (SSPC – PA9) Ultrasonic gauge.
- Moisture content reports.

8.0 Technical Data Sheets and Material Safety Data Sheets:

The following Technical Data Sheets and Material Safety Data Sheets are provided with the specification:

- Ultrasolve 900-003 (MEK)
- NuCote MT primer
- Ultraseal Sray
- NuCote UVC
- Bakkie bond 520-003

Manufactured by NUI – Member of the RIGIFoam Group

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