BCI BUILDING CHEMISTRY INDUSTRY

Method statement for BC MC Urethane

Introduction

A Moisture Curing Polyurethane (MCPU) Coating Method Statement outlines the process for applying moisture-curing polyurethane coatings, which are commonly used for waterproofing, corrosion protection, and floor coatings due to their durability and chemical resistance. Below is a general method statement for applying Building chemistry industry moisture-curing polyurethane coating BC MC Urethane

1. Scope

This method statement describes the procedures for surface preparation, application, and curing of moisture-curing polyurethane (MCPU) coatings on various substrates.

2. Materials and Tools

Materials Required:
Moisture-curing polyurethane (MCPU) coating : BC MC Urethane
BC poxy primer 349
Solvent for cleaning (as recommended by coating manufacturer)

2. Tools Required:

Brushes, rollers, or airless spray equipment
Personal protective equipment (PPE)
Moisture meter
Measuring tools (tape measure, caliper)
Mixing paddles and containers
Surface preparation tools (grinders, sanders, etc.)

3. Safety Precautions

Ensure proper ventilation in the work area to avoid inhalation of fumes.

Wear appropriate PPE, including gloves, safety goggles, and respirators.

Avoid open flames and smoking during application.

Follow BCI safety data sheet (SDS) for handling and storing the BC MC Urethane coating

4. Surface Preparation

Cleaning:

Thoroughly clean the surface to remove any dust, dirt, grease, oil, or other contaminants. Use appropriate cleaning agents based on the surface type and level of contamination.

Surface Condition:

The surface should be dry and free of moisture. Check the moisture content of the surface using a moisture meter. For best results, moisture levels should not exceed the manufacturer's recommendation (typically less than 4%).

Surface Roughness:

If the substrate is smooth, it may need to be roughened by grinding or sanding to ensure better adhesion of the coating.

Primer Application

Apply one coat of BC Poxy primer 349 , especially if the substrate is porous or highly absorbent. Allow the primer to dry as per the manufacturer's guidelines.

5. Mixing the Coating

Preparation of the Coating:

Before application, thoroughly mix the MCPU coating in accordance with the manufacturer's instructions. Some moisture-curing polyurethanes may need to be mixed with a catalyst or thinner.

Mixing Time:

Use a mechanical mixer at a low speed to avoid introducing air into the mixture. Mix until the coating is uniform in consistency and free of lumps.

6. Application

Environmental Conditions:

Ensure the temperature and humidity are within the recommended range for the product (typically 10°C to 35°C). Relative humidity should be above 30% to facilitate moisture curing.

Application Methods:

Brushing/Rolling: Use a brush or roller for small areas or touch-ups. Apply the coating evenly to avoid streaks or drips.

Spraying: For larger areas, use airless spray equipment. Adjust the spray gun to ensure even application without overspray.

Coating Thickness:

Apply the coating to the specified thickness, which may vary based on the manufacturer's recommendations (e.g., 150-250 microns dry film thickness). Multiple coats may be required to achieve the desired thickness. Allow the previous coat to cure before applying subsequent coats.

7. Curing

The curing process relies on the moisture in the atmosphere. Under standard conditions (23°C and 50% relative humidity), the coating may take 12-24 hours to dry to touch and up to 7 days for full curing.

Higher humidity levels will accelerate the curing process, while lower humidity can delay it.

Protect the coated surface from rain, dust, or other contaminants during the curing process.

8. Quality Control

Visual Inspection:

Inspect the coated surface for uniformity, coverage, and absence of defects such as bubbles, pinholes, or blisters.

Adhesion Test:

Conduct adhesion tests (as per ASTM D4541 or equivalent) to ensure proper bonding between the coating and the substrate.

Thickness Measurement:

Use a dry film thickness (DFT) gauge to measure the thickness of the cured coating and ensure it meets the project specifications.

9. Cleaning and Disposal

Cleaning Tools:

Clean all tools and equipment immediately after use with the appropriate solvent recommended by the coating manufacturer.

Waste Disposal:

Dispose of any unused materials, containers, and contaminated PPE in accordance with local environmental regulations.

10. Final Handover

Once the coating is fully cured and inspected, the surface can be handed over for use. Ensure that all records of application, curing times, and quality control tests are documented for future reference.