

Method statement for BC Pigment 400

Introduction

A method statement for preparing and applying BC Pigment 400 polyurea pigment paste in a waterproofing or protective coating system involves several key steps.

This document will describe the process of mixing, application, safety precautions, and quality control. Here's a general guide:

Scope

This method statement outlines the procedures to apply polyurea pigment paste to achieve a uniform, colored polyurea coating. Polyurea is a high-performance, fast-curing, and durable elastomer commonly used for waterproofing and protection.

Materials and Equipment

BC 237 Polyurea base components (Part A & Part B)
BC 237 Polyurea pigment paste (suitable for polyurea chemistry)
Mixing equipment (high-shear mixers or mechanical mixers)
Spray equipment (high-pressure spray machine with plural component system)
Personal protective equipment (PPE) (respirators, gloves, protective clothing, eye protection)
Surface preparation tools (grinders, sanders, brushes)
Moisture meter (to check substrate moisture levels)
Solvent wipes (to clean equipment)
Compressor and hoses (for air supply to spray machines)

Surface Preparation

Inspection: Ensure that the substrate (concrete, steel, or another surface) is structurally sound, dry, and free of contaminants like grease, oils, dust, or loose particles.

Cleaning: Remove dirt, grease, or contaminants using appropriate cleaners, detergents, or solvents.

Surface Roughening: For concrete surfaces, use mechanical methods like grinding or shot blasting to create a rough profile for better adhesion.

Moisture Content: Measure the moisture level of the substrate. Polyurea applications generally require the substrate to have a moisture content of less than 4%.

4. Masking and Protection

Mask off adjacent areas that will not receive the coating. Use protective coverings for windows, joints, or any nearby equipment.

5. Mixing of BC Polyurea Pigment Paste

Check Base Polyurea: Ensure both Part A (isocyanate) and Part B (polyol/resin) are in optimal condition.

Pigment Paste Preparation: Ensure the pigment paste is thoroughly mixed and uniform in color.

Mixing Ratio: Add pigment paste to the Part B (resin component) at the manufacturer's recommended ratio. Stir continuously until the paste is fully dispersed. The ratio of pigment paste to resin is critical to achieving consistent color.

Mixing Equipment: Use a high-shear mixer to ensure uniform distribution of the pigment. This ensures the final product has an even color throughout the application.

6. Application Procedure

Equipment Setup: Set up the plural-component spray machine, ensuring all equipment is functioning correctly and calibrated according to the manufacturer's guidelines.

Heating Components: Preheat Part A and Part B components to the specified temperatures (typically around 60-70°C) to ensure proper mixing and sprayability.

Spray Application:

Apply polyurea in multiple passes, building up the required thickness.

The typical thickness for polyurea applications is 1.5-3mm, depending on the project requirements.

Ensure even coverage and that the pigment paste has been adequately dispersed to achieve uniform coloration.

Curing Time: Polyurea generally has a fast cure time (seconds to minutes), but ensure that the coating is not disturbed while curing.



7. Quality Control

Inspection: Visually inspect the applied coating for consistency of color, texture, and thickness.

Thickness Measurement: Use a dry film thickness gauge to confirm that the polyurea has been applied to the required thickness.

Adhesion Testing: Perform a pull-off adhesion test to ensure the coating is properly bonded to the substrate.

Cure Testing: Verify the coating is fully cured and free of tackiness before subjecting it to any load or stress.

8. Cleanup and Disposal

Cleaning Equipment: Clean the spray equipment with appropriate solvents immediately after use to prevent clogging or hardening.

Waste Management: Dispose of any leftover materials, solvent-soaked rags, and containers according to local environmental regulations.

9. Health and Safety

PPE: Ensure all personnel are equipped with respirators, gloves, and protective clothing.

Ventilation: Apply polyurea in well-ventilated areas to prevent the accumulation of hazardous fumes.

Fire Hazards: Polyurea components can be flammable; take precautions when using near open flames or heat sources.

Emergency Response: Ensure emergency response procedures are in place, including access to first aid, eye wash stations, and fire extinguishers.

10. Conclusion

The polyurea pigment paste application should result in a high-quality, uniform coating that meets the specified thickness, adhesion, and aesthetic requirements. Adherence to the method statement ensures the durability and performance of the polyurea coating system.

