

Method Statement for BC Novoline 321 Epoxy Line Coat

1. Purpose

This method statement outlines the procedure for the application of BC Novoline 321 Epoxy based lining coat, specifically designed for aggressive chemical conditions. This system is primarily intended to protect surfaces exposed to harsh chemical environments such as acids, alkalis, and solvents.

2. Scope

This procedure applies to the application of BC Novoline 321 on concrete, steel, or other approved substrates exposed to aggressive chemical environments in industries such as chemical plants, wastewater treatment facilities, and storage tanks.

3. Responsibilities

- **Project Manager:** Oversee overall compliance with project specifications.
- **QA/QC Engineer:** Ensure the correct procedures are followed and that quality standards are maintained.
- **Site Supervisor:** Supervise and manage the application process on-site.
- **Applicator/Technician:** Carry out the surface preparation and application of the lining coat.

4. Reference Standards

- **BS EN 1504-2:** Products and systems for the protection and repair of concrete structures.
- **ASTM D 638:** Standard test method for tensile properties of plastics.
- **ISO 12944-6:** Corrosion protection of steel structures.
- **Manufacturer's Technical Data Sheet** for the specific BC Novoline 321 product being used.

5. Materials and Equipment

- **Epoxy Novoline 321-based lining coat** (approved product from a reputable manufacturer).
- **Hardener** (part of the two-component system, mixed as per manufacturer guidelines).
- **Primer** (if required by the system).
- **Surface preparation tools** such as grinders, shot blasters, or sandblasters.
- **Application tools:** rollers, brushes, spray equipment (depending on the recommended method).
- **Personal Protective Equipment (PPE):** gloves, goggles, respirators, coveralls.
- **Measuring tools:** film thickness gauge, temperature and humidity meters.

6. Surface Preparation

Proper surface preparation is critical to ensure good adhesion and the durability of the lining system. The following steps should be followed:

- **Concrete Surfaces:**
 - Clean the surface to remove all contaminants such as oil, grease, dust, and old coatings.
 - Abrasive blast the concrete to achieve a surface profile suitable for the coating (typically CSP 3-5).
 - Ensure the concrete moisture content is below 4% before applying the primer.
- **Steel Surfaces:**
 - Remove all rust, mill scale, and old coatings by abrasive blasting (SSPC-SP 10/NACE 2 or equivalent).
 - Ensure the surface profile is suitable for the epoxy coating.
- **Environmental Conditions:**
 - Ensure the ambient temperature is between the recommended range (typically 10°C to 30°C), and humidity is below 85%.
 - Avoid application during wet conditions or if condensation is present on the substrate.

7. Mixing of Epoxy Novoline 321

- Mix the Epoxy Novoline 321 resin and hardener in the correct ratio as specified by the manufacturer.
- Use mechanical mixing to ensure a uniform and homogeneous mixture.
- Avoid overmixing, as this may reduce the pot life.
- The mixed product must be used within the pot life specified by the manufacturer (typically 30–45 minutes at ambient temperatures).

8. Application Procedure

- **Primer (if required):**
 - Apply the primer evenly using a brush, roller, or spray, depending on the manufacturer's recommendation.
 - Allow the primer to cure as per the manufacturer's instructions (usually 4-6 hours or until it is touch-dry).
- **Epoxy Novoline 321 Coat:**
 - Apply the first coat of the Epoxy Novoline 321 lining using a roller, brush, or spray gun. The coating should be applied evenly, and care should be taken to avoid runs and sagging.
 - Ensure the first coat has adequate curing time before applying subsequent coats (typically 8-12 hours for re-coating at 25°C, but check manufacturer's instructions).
 - Apply additional coats to achieve the required film thickness (usually 400–800 microns per coat depending on the environment and service conditions).
 - Maintain a wet edge to ensure proper adhesion between coats.
 - After the final coat, allow sufficient time for the lining to cure and harden (usually 7 days at ambient temperature).

9. Curing

- Allow the epoxy to cure according to the manufacturer's recommendations, considering ambient temperature and humidity.
- In cold conditions, consider using heat lamps or other methods to facilitate curing.
- **Cure Time:** The total cure time typically ranges from 7 days to 14 days, depending on temperature and the chemical exposure level.

10. Inspection and Quality Control

- **Visual Inspection:** Check for uniform coverage, no air bubbles, and proper film thickness.
- **Film Thickness Measurement:** Use a wet or dry film thickness gauge to ensure the required DFT (dry film thickness) is achieved.
- **Adhesion Test:** Perform adhesion tests (cross-hatch or pull-off tests) to ensure the coating bonds correctly to the substrate.
- **Chemical Resistance Test:** If necessary, test the coating in a small area under actual service conditions.

11. Health, Safety, and Environmental Precautions

- Ensure proper ventilation in the work area, especially if applying in confined spaces.
- Workers must wear appropriate PPE, including gloves, safety goggles, respirators, and protective clothing.
- Handle and dispose of waste materials in accordance with local environmental regulations and manufacturer's safety data sheets (SDS).
- Ensure that any potential skin contact or inhalation risks are minimized.

12. Acceptance Criteria

- Coating thickness is within the specified range.
- No defects such as cracks, bubbles, or uneven areas are present.
- The surface is free from contamination or foreign materials.
- The coating has passed all required performance tests, including chemical resistance and adhesion.

13. Documentation and Handover

- Record the surface preparation methods, material batch numbers, application details, and test results.
- Submit a final report that includes a certificate of compliance with the technical specifications.
- Provide the client with any necessary maintenance and care instructions for the epoxy coating.

