BCI BUILDING CHEMISTRY INDUSTRY

Method Statement for SBS Bitumen Membrane Waterproofing

Introduction

This method statement outlines the process for installing an SBS (Styrene-Butadiene-Styrene) modified bitumen membrane for waterproofing. SBS membranes are flexible, elastomeric, and provide excellent adhesion and resistance to environmental factors like UV, water, and temperature variations.

Preparation and Pre-installation

Site Inspection: Ensure the surface is clean, dry, and free from dust, grease, oil, or any other contaminants. Repair any visible cracks, voids, or defects.

Surface Priming: Apply a bitumen-based primer over the entire surface to enhance membrane adhesion. The primer should be allowed to dry as per manufacturer's instructions.

Materials: Bitumen primer, roller/brush for application.

Drying Time: Typically 1-2 hours depending on the temperature and humidity.

Safety Precautions: Ensure workers have PPE (personal protective equipment), including gloves, safety glasses, and heat-resistant clothing. Fire extinguishers should be on hand when using a gas torch.

Membrane Installation

Cutting the Membrane: Unroll and cut the SBS bitumen membrane sheets to the required length, ensuring overlaps of at least 100mm on the side and 150mm on the end laps.

Tools: Utility knife or scissors.

Heating the Membrane: Using a gas torch, heat the underside of the SBS membrane until the bitumen becomes soft and tacky.

Tools: Gas torch with appropriate settings.

Torch Technique: Move the torch in a sweeping motion to ensure even heating, and be careful not to overheat or burn the membrane.

Positioning: Gradually unroll the heated membrane onto the primed surface, ensuring proper alignment. Press it firmly using a roller to eliminate air pockets and wrinkles.

Roller: Use a hand roller to ensure good adhesion and eliminate any trapped air.

Overlaps: Ensure all overlaps are properly sealed by torching the overlap area and pressing it with a roller.

For side laps (100mm) and end laps (150mm), ensure sufficient heat is applied to bond the membranes.

3. Details and Corners

Upstands and Edges: Apply the SBS membrane carefully at upstands, corners, and edges. Cut and mold the membrane to fit these areas and ensure full bonding using the torch.

Drains and Penetrations: Around drains, pipes, or any roof penetrations, cut the membrane to fit and ensure a watertight seal by applying additional membrane layers as necessary.

Reinforce: Add extra layers or use pre-formed corners at vulnerable points.

4. Finishing and Protection

Final Inspection: Inspect the membrane for any air bubbles, blisters, or unbonded sections. Reheat and press any imperfections as needed.

Protective Layer (Optional): In exposed areas, a protective layer of gravel, concrete screed, or tiles may be applied over the membrane to protect it from mechanical damage and UV exposure.

Drainage Layer: If required, install a drainage layer or filter fabric to allow for proper water flow.

BCI
BUILDING
CHEMISTRY
INDUSTRY

5. Quality Control and Testing

Water Testing: Conduct a water ponding test (if applicable) for 24–48 hours to ensure the waterproofing integrity of the system.

Inspection: Ensure that the installation is free from defects such as unbonded areas or weak seams.

Safety Measures

Fire Safety: Since gas torches are used, ensure there are fire extinguishers nearby. Workers should be trained in fire safety procedures.

Ventilation: Ensure good ventilation if working in enclosed areas to prevent the accumulation of fumes.

PPE: Workers should wear gloves, goggles, safety shoes, and heat-resistant clothing during installation.

Materials and Tools Required
SBS Bitumen Membrane Rolls
Gas Torch
BC Tec Bitumen Primer
Hand Roller
Utility Knife
Personal Protective Equipment (PPE)
Fire Extinguisher

This method ensures a durable, flexible, and watertight SBS bitumen membrane system that will protect the structure from water ingress. Proper attention to detail, overlaps, and surface preparation is crucial for the system's longevity.