

PRODUCT DATA SHEET

Sikalastic®-311 (AE)

COLD APPLIED PITCH MODIFIED POLYURETHANE WATERPROOFING MEMBRANE

DESCRIPTION

Sikalastic®-311 (AE) is a cold applied Single component Pitch Modified Hydrophilic polyurethane waterproofing membrane. Suitable for use in hot and tropical climatic conditions.

USES

Sikalastic®-311 (AE) may only be used by experienced professionals.

- For waterproofing solutions in both new construction and refurbishment projects
- For use as a waterproofing membrane underneath hard landscaping on podium areas
- For the waterproofing of bathrooms, shower rooms, kitchens, Balconies and plumbing rooms beneath hard protection, for example ceramic tiles
- Substructure foundations as a damp-proofing Solution
- Horizontal and vertical applications

CHARACTERISTICS / ADVANTAGES

- Highly elastic and crack-bridging
- One-component - ready to use
- Excellent adhesion on porous and non-porous substrates
- Seamless, fully bonded waterproofing membrane
- High tensile strength
- Resistant to oxidation
- Repair friendly
- Cold applied - requires no heat or flame
- Self priming
- Thixotropic
- Elastomeric
- Moisture tolerant to damp substrates

APPROVALS / STANDARDS

Sikalastic®-311 (AE) follows the requirements of ASTM D 2833, D-412, D-417, E-96/BW & ASTM C 836
Nil water penetration in accordance with BS EN 12390

PRODUCT INFORMATION

Chemical Base	Pitch Modified Polyurethane Resin
Packaging	20 L Pail (~22 kg)
Appearance / Colour	Dark Black
Shelf Life	12 months minimum from date of production if stored properly in original, unopened and undamaged sealed packaging.
Storage Conditions	Store in dry conditions in original packaging at temperatures between +5 °C and +35 °C. Protect from direct sunlight and frost.
Density	~1.1 (ASTM D6937 - 08)
Solid content by weight	~65 %
Solid content by volume	~85 %

TECHNICAL INFORMATION

Shore A Hardness	~53	(ASTM D 2240)
Tensile Strength	~1.5 N/mm ² unreinforced	(ASTM D 412)
Elongation at Break	~600 %	(ASTM D 412)
Tear Strength	~22 N/mm ²	(ASTM D 624)
Chemical Resistance	Sikalastic®-311 (AE) is resistant to de-icing salts, bitumen, alkalis, fresh- and ground water and various chemicals.	
Permeability to Water Vapour	Nil	(ASTM E96)

SYSTEM INFORMATION

Systems	Layer	Product	Consumption	Dry Film Thickness (DFT)
	Primer	Sikalastic®-311 (AE) or SikaBit® P-12 AE or SikaBit® P-11 SA	~210 g/m ² (0.19 L/m ²) ~300 g/m ²	~161µm
	Base Coat	Sikalastic®-311 (AE)	~750 g/m ² (0.61 L/m ²)	~520 µm
	Top Coat	Sikalastic®-311 (AE)	~750 g/m ² (0.61 L/m ²)	~520 µm
				Total DFT 1200 µm minimum

The above are minimum system coverage rates, and may vary depending on specification and project requirements.

APPLICATION INFORMATION

Consumption	~1.1 kg/ m ² and mm Wet Film Thickness These figures are theoretical and do not allow for any additional material due to surface porosity, surface profile, variations in level and wastage etc.	
Ambient Air Temperature	+5 °C min. / +40 °C max.	
Relative Air Humidity	5 % min. / 85 % max.	
Substrate Temperature	+5 °C min. / +60 °C max.	
Substrate Moisture Content	Damp or dry substrate, no standing water No rising moisture according to ASTM (Polyethylene-sheet)	
Curing Time	12 h	Touch Dry
	24 h - 36 h	Partial cure (Water-test)
	7 d	Full cure

Waiting Time / Overcoating

Before applying Sikalastic®-311 (AE) on Sikalastic®-311 (AE).

Substrate temperature	Relative humidity	Minimum	Maximum ¹⁾
+10 °C	50 %	~4 h	~24 h
+20 °C	50 %	~2 h	~24 h
+30 °C	50 %	~1 h	~24 h

¹⁾ Assuming that all dirt has been removed and contamination is avoided. If over coating window of 24 hours is not achieved the area should be cleaned and then primed with SikaBit® P-11 SA or SikaBit® P-12 AE as a re-activation primer.

Note: Times are approximate and will be affected by coating thickness and changing ambient conditions particularly temperature and relative humidity. Low temperature and high humidity retard curing, while high temperatures and low humidity accelerate curing progression.

APPLICATION INSTRUCTIONS

SUBSTRATE QUALITY

All substrates must be cleaned and prepared using high pressure water jet. Abrasive blast cleaning, scari-fying equipment to or other suitable approved mechanical methods.

Cementitious substrates:

Concrete should be cured for at least 28 days and should have a pull-off strength > 1.5 N/mm². Loose friable material and weak concrete must be completely removed by mechanical means to achieve an open textured surface and all surface defects such as blowholes and voids must be fully exposed. Repairs to the substrate, filling of joints, blowholes/voids and surface leveling must be carried out using the appropriate Sika® products. Refer to Sika's Technical Department for further advice. High spots must be removed by for example grinding.

Outgassing is a naturally occurring phenomenon of concrete that can produce pinholes in subsequently applied coatings. The concrete must be carefully assessed for air entrapment, and surface finish prior to any coating work. Installing the Sikalastic®-311 (AE) either when the concrete temperature is falling or stable can reduce outgassing.

Prime the substrate before applying the Sikalastic®-311 (AE) systems.

Brick and stone:

Mortar joints must be sound and flush pointed.

Bituminous felt:

Ensure that Bituminous felt is firmly adhered or mechanically fixed to the substrate.

Bituminous felt should not contain any badly degraded areas and be primed before applying Sikalastic®-311 (AE).

Metals:

Metals must be in a clean sound rust free condition. Metals surfaces must be free of oil and greases. Abrade exposed surfaces to reveal bright metal and primed with Sikalastic® Metal Primer.

Paints/Coatings:

Ensure that the existing material is sound and firmly adhered. Remove any oxidized layers.

Please note: Always apply a test area first

APPLICATION

- Prior the application of Sikalastic®-311 (AE) the priming coat if used must have cured tack-free.
 - Damageable areas (handrails, etc) have to be protected with tape or plastic wrapping.
 - **Priming:** Prime the surface using Self Primed Sikalastic®-311 (AE).
 - **Application:** Apply 2 coats Sikalastic®-311 (AE) to the prepared substrate after mixing the Sikalastic®-311 (AE) with a slow speed mixer, then apply it using a notched trowel and spread the product evenly over the area. Apply two coats in order to avoid pinholes.
 - **Reinforcement Sheet:** for higher tensile strength and Tear resistance it is recommended to incorporate Sikalastic® Reemat Premium reinforcement sheet in between the 2 coats with 24 hours curing period prior to applying the final coats, in which a homogeneous finish should be achieved at the final stage of coating application.
 - **UV Exposed Areas:** for UV protection apply Sikalastic® 560-GCC at a minimum coverage rate of 1.4 kg/m². Applied in minimum of 2 coats.
 - If the coating is to be covered with a hard protection (ceramic tiles, stone slabs). For bonding tiles or equivalent materials, use SikaCeram C2 type according to EN 12004 or an adhesive compatible with Sikalastic®-311 (AE). The application can take place after the second layer has fully cured.
- Note:** Please refer to the most recent issue of the specific Method Statement.

CLEANING OF TOOLS

Clean all tools and application equipment with Thinner C immediately after use. Hardened and/or cured material can only be removed mechanically.

LIMITATIONS

- When applying Sikalastic®-311 (AE) in wet rooms it is recommended to install mortar arris's / fillets and Sika® FlexiTape or Sikalastic® Reemat Premium at all upstands and skirtings. Drainage pipes and outlets must be sealed with Sikaflex® Construction+ prior to the waterproofing.
- Sikalastic®-311 (AE) may be flood tested when fully cured using 50 millimetre depth of water for a maximum period of 24 hours after Sikalastic®-311 (AE) has fully cured.
- Ensure that each coat of Sikalastic®-311 (AE) is totally

dry and the surface is without pinholes before applying further coats.

- Whilst Sikalastic®-311 (AE) is resistant to most commonly encountered atmospheric pollutants, proprietary cleaning solutions and environmental spoilage, the suitability of the product for use in applications with increased chemical resistance requirements should first be established.
- If over coating window of 24 hours is not achieved the area should be cleaned and then primed with SikaBit® P-11 SA or SikaBit® P-12 AE as a reactivation primer.
- Sikalastic®-311 (AE) is not suitable for permanent water immersion.
- Protect the system immediately after completion of installation works to prevent any damages.
- Sikalastic®-311 (AE) is not resistant to permanent UV exposure and weathering. It must always be protected against UV exposure within a defined period of time, 21 days maximum.

BASIS OF PRODUCT DATA

All technical data stated in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

LOCAL RESTRICTIONS

Please note that as a result of specific local regulations the declared data for this product may vary from country to country. Please consult the local Product Data Sheet for the exact product data.

ECOLOGY

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Safety Data Sheet (SDS) containing physical, ecological, toxicological and other safety-related data.

LEGAL NOTES

The information, and, in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.

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