Product Data Sheet
Version 3 (07 / 2013)

SikaMembran® Universal / Outdoor plus / Strong

Vapor / waterproofing membrane system for curtain wall facades

Technical Product Data

Membrane	SikaMembran® Universal	SikaMembran® Outdoor plus	SikaMembran® Strong
Chemical base	Elastic EPDM Butyl modified	Elastic EPDM	Elastic EPDM
Color	Black		
Mass per unit area	0.78 kg/m^2 approx.	0.78 kg/m^2 approx.	1.56 kg/m^2 approx.
Thickness	0.6 mm approx.	0.6 mm approx.	1.2 mm approx.
Diffusion Resistance Coefficient µ (DIN 53122-1)	103'000 approx.	5'000 approx.	66'000 approx.
Equivalent Air Layer Thickness s_d -Value	62 m approx.	3 m approx.	79 m approx.
Elongation at break (ISO 37)	350% approx.	350% approx.	350% approx.
Application Temperature	5 - 35°C (40 - 75°F)		
Tensile strength (ISO 37)	5 N/mm^2 approx.	4 N/mm^2 approx.	5 N/mm^2 approx.
Tear propagation resistance (ISO 34)	8 N/mm approx.	10 N/mm approx.	8 N/mm approx.
Ozone Resistance (DIN1431/1) 200 PPHM, 40°C, 20% Elongation, 168 h	No cracks		
Service temperature (approx.)	-40 - 90°C (-40 - 195°F)		
Storage conditions	dry conditions and protected from direct sunlight at temperatures between 5 and 30°C (40 and 85°F)		
Provided with CE-mark according to EN 13984: 2011[1]	DoP 01 52 32 00 001 9 001000 1117	DoP 01 52 32 00 003 9 001000 1117	DoP 01 52 32 00 004 9 001000 1117

[1)] Certified by notified test laboratories 1508 and 0757

Description

The SikaMembran® system is used to provide vapor control layers and waterproof barriers for curtain walling.

SikaMembran® is manufactured in accordance with ISO 9001 quality assurance system and the responsible care program.

Product Benefits

- fast, easy + secure application
- membrane pre-treatment free
- also suitable for uneven substrates (blowholes in concrete), leveling of substrate by adhesive
- adjustment of membrane possible until 30 min. after fixing
- suited to site conditions
- durable bond and barrier/seal
- easy application even in corners due to flexible membrane
- no additional mechanical fixing necessary
- Ozone- and UV-resistant
- Meet fire retardant requirements of EN 13501-1 Class E (under free suspension)

Areas of Application

The flexible SikaMembran® sheets, fixed between structure and incorporated units (e.g. façade elements, windows, etc.) using SikaBond®-TF plus N adhesive (alternatively Sikasil® WS-605 S with Sika® Aktivator on SikaMembran® or Sikasil® GS-295), provide a secure and durable vapor barrier and waterproof seal at junctions between building elements.

SikaMembran® Universal has a relatively high vapor diffusion resistance and is thus applicable on both the warm (high vapor pressure) and the cold (low vapor pressure) side of the construction under most climatic conditions.

SikaMembran® Outdoor plus has a very low vapor diffusion resistance and is recommended on the cold side if there is an extremely high vapor pressure on the warm side.

Industry

Industry

Design Considerations

Vapor diffusion behavior of different sealing types (wet sealants and membranes)

Product	Diffusion resistance coefficient μ	Joint depth / sheet thickness	Equivalent air layer thickness s_d
Sikaflex® PU	2'500 approx.	8 mm 12 mm	20 m approx. 30 m approx.
Sikasil® Silicones	1'000 approx.	8 mm 12 mm	8 m approx. 12 m approx.
SikaMembran® Universal	103'000 approx.	0.6 mm	62 m approx.
SikaMembran® Outdoor plus	5'000 approx.	0.6 mm	3 m approx.
SikaMembran® Strong	66'000 approx.	1.2 mm	72 m approx.

Design Considerations (cont.)

- Generally the seal at the warmer side is at least as vapor proof as the seal at the cooler side, also when combining membranes with wet sealants ($s_{d\ warm} \geq s_{d\ cold}$).
- In order to prevent thermal bridging or internal condensation ensure adequate provision of insulation (mineral wool or similar) within the joint prior to sealing.
- Design details need to be determined by the responsible engineer and building physicist.

Method of Application

Surface preparation

The substrates must be strong, clean, dry, free from dust, grease and oil. No primer required on concrete and standard construction materials.

Application

- Apply SikaBond®-TF plus N adhesive (alternatively Sikasil® WS-605 S with Sika® Aktivator on SikaMembran® or Sikasil® GS-295), to structure using caulking gun (nozzle diameter approx. 8 mm).
- Spread the adhesive in bead form using spatula to approx. 4-5 cm width and 1 mm thickness (depending on substrate).
- Fix SikaMembran® sheet in a way that movement of the connected building parts can be absorbed by the membrane without damaging it. Press membrane into adhesive. Overlap at end joints: 10 cm.
- Press on SikaMembran® sheet using a plastic roller. The membrane must be fully bonded over a width of 4 cm.
- The membrane may be readjusted during a period of 30 minutes after fixing.

Handling

For the safe handling of adhesives and sealants refer to the corresponding Product Data Sheet.

Consumption of adhesive

1 Unipack 600 ml for approx. 7 m of membrane (1 bead on each side)

Notes on Application, Limits

Assure design details by responsible engineer.

SikaMembran® system needs to be applied only by trained and experienced contractors.

SikaMembran® is not resistant to mineral oils, petroleum, benzene, fuel, and toluene etc.

SikaMembran® is not suitable for permanent immersion or standing water.

SikaMembran® Outdoor plus is perforated and thus not resistant to driven rain at wind loads exceeding 0.8 kPa.

Packaging Information

Length [m / roll]	25
Width of rolls [mm]	100, 150, 200, 250, 300, 350, 400, 450, 500, 600, 700, 1200, 1400

Value Bases

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.

Health and Safety Information

For information and advice regarding transportation, handling, storage and disposal of chemical products, users shall refer to the actual Safety Data Sheets containing physical, ecological, toxicological and other safety-related data.

Legal Notes