BUILDING TRUST
CONSTRUIRE LA CONFIANCE

PRODUCT DATA SHEET

Sikalastic®-624 WP

LIQUID-APPLIED ALKALINE-RESISTANT ONE-COMPONENT SATURATING RESIN WITH GLASS FIBRE OR POLYESTER REINFORCEMENT

PRODUCT DESCRIPTION

Sikalastic®-624 WP waterproofing systems combine a cold-applied, aliphatic, one-component, alkali-resistant, moisture-triggered polyurethane resin with glass fibre mat or polyester fleece reinforcement to create a seamless membrane and flashing system. Typical applications include a separate wearing course (overlayment or overburden), but Sikalastic®-624 WP is UV-resistant without protection board and is therefore suitable for direct exposure waterproofing applications as well. System components are:

- Sika® or Sikalastic® Primer - Select primer per substrate material in accordance with Priming Guide.
- Sikalastic®-624 WP - Resin used for all systems with both Reemat™ fiberglass and polyester fleece reinforcement.
- Sikalastic® Reemat™ Premium - Chopped strand glass fibre mat.
- Sika® Fleece 120, 140, 170 - Non-woven, needle-punched polyester fleece in various weights.

WHERE TO USE

- Sikalastic® waterproofing systems, including Sikalastic® Plaza Deck/PMA and Vegetated systems for both new construction and refurbishment.
- Split-slab waterproofing.
- Vegetated deck waterproofing.
- Plaza decks with concrete pavers, and asphalt or concrete paving stones in a sand bed.
- Waterproofing under tile in a mortar bed.
- Applications involving cementitious and asphalt pavement overlays.
- Waterproofing around/beneath mechanical equipment.

CHARACTERISTICS / ADVANTAGES

- Proven technology with over 25 year track record.
- Single component - no mixing and ready to use.
- Fully reinforced with highly conformable Sika® Reemat™ or Sika® Fleece.
- Integrated flashings utilizing same resin and reinforcements.
- Ideal for complex details and geometry or when accessibility is limited.
- Moisture-triggered chemistry that is rapidly weatherproof after application.
- Highly elastic and crack bridging.
- Seamless and fully-adhered.
- Vapor permeable.
- UV-resistant and non-yellowing.
- Abrasion and chemical resistant.
- Alkali-resistant formulation.

APPROVALS / CERTIFICATES

Meets ASTM C836 Standard Specification for High Solids Content, Cold Liquid-Applied Elastomeric Waterproofing Membrane for Use with Separate Wearing Course.

PRODUCT INFORMATION

Composition / Manufacturing	Single component, moisture-triggered, aliphatic polyurethane	
Packaging	18.9 L (5 US gal.) pail	
Appearance / Colour	White (RAL 9016), Pearl Gray	
Shelf Life	9 months in original, unopened and undamaged sealed containers.	
Storage Conditions	Store dry at temperatures between 2 - 25 °C (35 - 77 °F). Condition material at temperatures between 10 - 25 °C (50 - 77 °F) before using and for ease of application.	
Density	1.3 kg/L (10.8 lb/US gal.)	(all values at +23 °C)
Solid content by weight	78.9 %	
Solid content by volume	70.9 %	
Volatile organic compound (VOC) content	209 g/L	

TECHNICAL INFORMATION

Tensile Strength	Ref. reinforced system data	(ASTM D-751)
Elongation at Break	Ref. reinforced system data	(ASTM D-751)
Resistance to Static Puncture	Ref. reinforced system data	(ASTM D-5602)
Chemical Resistance	Strong resistance to a wide range of reagents, including paraffin, petrol, fuel oil, white spirit, acid rain, detergents and moderate solutions of acids and alkalis. Some low molecular weight alcohols can soften the material. Contact Technical Service for specific recomendations. Salt spray to ASTM B117 (1000 hours continuous exposure) and prohesion testing to ASTM G85-94: Annex A5 (1000 hours cyclic exposure)	
Service Temperature	-30 to 80 °C (-22 to 176 °F) intermittent	

APPLICATION INFORMATION

Consumption

Sika Reemat	Sika Fleece
1.3 m²/L (53 sf/gal) - 0.76 mm (30 mils) w.f.t.*	0.37 m²/L (15 sf/gal) - 2.67 mm (105 mils) w.f.t.*
0.98 m²/L (40 sf/gal) - 1.02 mm (40 mils) w.f.t.*	0.47 m²/L (19 sf/gal) - 0.48 mm (85 mils) w.f.t.*
0.86 m²/L (35 sf/gal) - 0.89 mm (45 mils) w.f.t.*	0.56 m²/L (23 sf/gal) - 1.78 mm (70 mils) w.f.t.*

NOTE: Coverage rates are optimal - coverage rates will vary depending on temperature, surface roughness and porosity, and application technique.
*w.f.t.: wet film thickness

Ambient Air Temperature	5 °C (41 °F) min. / 35 °C (95 °F) max.
Relative Air Humidity	80 % R.H. max.
Dew Point	Beware of condensation. The substrate and uncured coating must be ≥ 3 °C (5 °F) above dew point.
Substrate Temperature	5 °C (41 °F) min. / 60°C (140°F) max.

Substrate Moisture Content	≤ 4 % moisture content Test method: Sika®-Tramex meter No rising moisture according to ASTM (Polyethylene-sheet)
Pot Life	Sikalastic®-624 WP is designed for fast curing. High temperatures combined with high air humidity will increase the curing process. Thus, material inopened containers should be applied immediately. In opened containers, the material will form a film after 1 hour approx. (at 24 °C (75 °F) and 50 % R.H.)

Curing Time

Ambient conditions	Minimum waiting time overcoating
+4 °C (+40 °F) / 50 % r.h.	14 hours
+10 °C (+50 °F) / 50 % r.h.	6 hours
+21 °C (+70 °F) / 50 % r.h.	5 hours

*After 7 days the surface must be cleaned and primed with Sika® Reactivation Primer before continuing.
Note: Times are approximate and will be affected by changing ambient conditions particularly temperature and relative humidity.

Applied Product Ready for Use

Ambient conditions	Rain resistant	Touch dry	Full cure
+4 °C (+40 °F) / 50 % r.h.	10 min.	12 hours	24 hours
+10 °C (+50 °F) / 50 % r.h..	10 min.	6 hours	18–24 hours
+21 °C (+70 °F) / 50 % r.h.	10 min.	4 hours	12–18 hours

Note: Times are approximate and will be affected by changing ambient conditions particularly temperature and relative humidity.

BASIS OF PRODUCT DATA

Product properties are typically averages, obtained under laboratory conditions. Reasonable variations can be expected on-site due to local factors, including environment, preparation, application, curing and test methods.

LIMITATIONS

- To avoid dew point conditions during application, relative humidity must be no more than 95 % and substrate temperature must be at least 3 °C (5 °F) above measured dew point temperatures.
- Minimum ambient and substrate temperature during application and curing of material is 2 °C (36 °F); maximum is 35 °C (95 °F). Surface temperatures must not exceed 60 °C (140 °F). Frequent monitoring of ambient and substrate temperature should always be done when applying polyurethane resins. Note that low temperatures and low humidity will slow down the cure, and high temperatures and high humidity will accelerate it.
- Do not apply on substrates with moisture content exceeding 4 % by weight, measured by Tramex® Concrete Moisture Meter.
- Minimum age of concrete must be 28 days depending on curing and drying conditions.
- Do not thin with solvents.
- Do not store materials outdoors exposed to sunlight and moisture for prolonged periods.
- Do not apply to substrate surfaces where moisture vapor transmission will occur during application and cure. This condition may be checked using ASTM D4263 (Polyethylene sheet method).
- Substrate must be dry prior to application. Do not apply to a frosted, wet or damp surface. Allow sufficient time for the substrate to dry after rain or inclement weather, as there is the potential for bonding problems.
- On substrates likely to exhibit outgassing apply during falling ambient and substrate temperature. If applied during rising temperature pinholing or blistering may occur.
- Do not use for indoor applications without adequate ventilation during application.
- Precautions should be taken to prevent odors and/or vapors from entering the building/structure, including but not limited to turning off and sealing air intake vents or other means of ingress for odors and/or vapors into the building/structure during product application and cure.
- Not recommended for direct exposure to heavy traffic; pedestrian maintenance traffic is generally acceptable aggregate surfacing is suggested.

- Any repairs required to achieve a level surface must be performed prior to application (consult a Sika representative for guidance on various product solutions). Surface irregularities may reflect through the cured system.
- When applying over existing coatings or membranes compatibility and adhesion testing and subsequent approval by Sika Canada is required.
- Opening to traffic prior to cure may result in loss of aggregate or permanent staining and subsequent premature failure.
- On grade concrete decks should not be covered with Sikalastic® WP membrane systems.
- Unvented metal pan, split/sandwich slab with encapsulated membrane and/or insulation, cinder fill decks, and lightweight insulating concrete deck overlays should not be covered with Sikalastic® WP systems without additional deck evaluation and subsequent approval by Sika Canada.
- Do not subject to continuous immersion.
- Not recommended for use over ceramic tile.

ENVIRONMENT, HEALTH & SAFETY

User must read the most recent corresponding Safety Data Sheets (SDS) before using any products. The SDS provides information and advice on the safe handling, storage and disposal of chemical products and contains physical, ecological, toxicological and other safety-related data.

APPLICATION INSTRUCTIONS

SURFACE PREPARATION

All substrate surfaces shall be clean, dry and sound. Acceptable substrates include: sound concrete and cementitious screed, metals, wood, modified bitumen, mineralized felt, EPDM, hypalon, TPO, sprayed polyurethane foam, brick and stone, slate and tile, and existing liquid applied membranes. Reference separate System Data Sheet for specific surface preparation requirements.

Primer
Apply primer of a type suitable for the substrate. Allow primer to cure completely before applying Sikalastic®-624 WP resin. Reference separate System Data Sheet for specific primer recommendations.

MIXING

No mixing necessary

APPLICATION

Substrate Evaluation
Concrete and cementitious substrates
New concrete shall be allowed to cure a minimum of 28 days. Concrete shall have a minimum compresive strength of 20.7 MPa (3000 psi) and exhibit a minimum tensile bond strength of 1.4 MPa (200 psi).
Moist or sheet curing methods should be used, as opposed to the use of curing compounds, which may interfere with the bond of the membrane. Inspect the concrete, including upstands, and all areas should be hammer tested. Concrete must be suitably finished, preferably by wood float or steel pan.
A power float finish is acceptable where the surface is prepared to avoid laitance (a tamped finish is not acceptable). The surface finish must be uniform and free from defects such as laitance, voids or honeycombing.

Gypsum and Cement based sheathing
Sheathing boards shall be clean, dry and dust-free, and shall be properly secured to the structure. Loose, damaged, or contaminated boards shall be removed and replaced.

Brick and stone
Mortar joints must be sound and preferably flush pointed.

Asphalt
Asphalt contains volatiles which can cause bleeding and slight non-detrimental staining. The asphalt must be carefully assessed for moisture and/or air entrapment, grade and surface finish.

Bituminous felt
Ensure that bituminous felt is firmly adhered or mechanically-fixed to the substrate. Bituminous felt shall not contain badly degraded areas.

Bituminous coatings
Bituminous coatings shall not have sticky or mobile surfaces, volatile mastic coatings, or old coal tar coatings.

Metals
Metals must be in sound condition.

Wooden substrates
Plywood and timber-based decks must be in good condition, firmly adhered and mechanically-fixed. All plywood should be identified as conforming to PS 1 for construction and industrial plywood by grade, APA (American Plywood Association) trademark, or equivalent. For maximum smoothness, EXT Type APA, Grade A-C should be used, and the “A” sides should be positioned to receive the Sikalastic® resin. Plywood decks to receive resin directly shall be at least 12.7 mm (1/2 in) thick and attached and supported according to APA guidelines, using only non-rusting screw, spiral or coated nail type fasteners. A good practice would be to recess or counter sink fasteners 3.2 to 6.4 mm (1/8 to 1/4 in) and fill with an appropriate Sikaflex® sealant. Suitable edge support to prevent differential deflection between panels shall be provided. Panel edges shall be tongue and groove or supported on solid blocking. Space panels 3.2 to 4.8 mm (1/8 to 3/16 in) at panel ends.

Paints and coatings
Ensure the existing material is sound and firmly adhered.

Existing Sikalastic system
The existing Sikalastic® system shall be soundly adhered to the substrate.

Surface Preparation
Concrete and cementitious substrates
Cementitious or mineral based substrates must be prepared mechanically using abrasive blast cleaning or scarifying equipment to remove cement laitance and to achieve an open textured surface (ICRI/CSP 3 - 5). Loose friable material and weak concrete must be completely removed and surface defects such as blowholes and voids must be fully exposed. The amount of embedment coat required may increase over rough or highly porous surfaces.

Gypsum and Cement based sheathing
Sheathing boards shall be clean, dry and dust-free. Secure loose boards if in sound condition. Damaged or contaminated boards shall be removed and replaced.

Brick and stone
Power wash and use biodegradeable non-sudsing detergent with clean water rinse as required.

Asphalt
Power wash and use biodegradeable non-sudsing detergent with clean water rinse as required. All major cracks should be sealed to allow continuity of the Sikalastic® system.

Bituminous felt
Power wash and use biodegradeable non-sudsing detergent with clean water rinse as required. Treat blisters by star cutting and removing any underlying water. Allow to dry and re-adhere using suitable adhesive.

Bituminous coatings
Remove any loose or degraded coatings.

Metals
Ferrous metals should be thoroughly cleaned by grinding or blast cleaning prior to priming (SSPC-SP3 to nearwhite metal.)
Non-ferrous metals are prepared by removing any deposits of dust and oxidation and abrading to bright metal. Wire brushing can be used for soft metal such as lead. The surface must be clean and free from grease which, if present, must be removed with a solvent wipe or wash with detergent, rinse and dry.

Wooden substrates
Timber and timber based decks require additional reinforcement such as the installation of plywood, approved insulation or cover board. Small timber protrusions and suitable decks may be treated directly, provided that the timber is of exterior quality, e.g., exterior grade plywood, etc. Fill joints flush with an appropriate Sikaflex® sealant.

Paints/Coatings
Remove any loose or degraded coatings. Ensure the surface is clean and free from grease.

Sikaplan®/Sarnafil® membranes
Clean membranes with Sarna Cleaner (PVC membranes) and Sarnafil® T Clean (FPO membranes) prior to application of primer.

Existing Sikalastic Systems
Clean the membrane using a water jet at approximately 140 bar (2000 psi) and biodegradeable non-sudsing detergent with clean water rinse. Allow to dry.

Application
Refer to Priming Guide to select primer for properly evaluated and prepared substrate. Refer to separate primer Product Data Sheet for for application methods, coverage rates, cure times and recoat windows. Always allow primer to cure thoroughly before applying detail or base resin layer.

Substrate	Remark	Concrete Primer	DTE Epoxy Primer	Bonding Primer
CONCRETE	(1)	X	X	X
LIGHTWEIGHT CONCRETE	(1)		X	
BRICK, STONE	(3)			X
BITUMINOUS SUBSTRATE				
- Asphalt, bitumininous felts, bituminous coatings, granulated or smooth SBS & APP cap sheets	(2,3)			
ROOF TILES (UNGLAZED)	(3,4)			X
METALS				
- Aluminum, galvanized, cast iron, copper, lead, brass, stainless steel, steel, zinc	(3)			
PRE-COATED METAL	(3)			
PAINTS	(3)			
- Paints & coatings	(3)			
- Aluminized solar reflective coatings	(3)			
WOOD-TIMBER & PLYWOOD	(3)			X

Substrate	Remark	EP Primer/Sealer	Contact Sika
CONCRETE	(1)	X	
LIGHTWEIGHT CONCRETE	(1)		X
BRICK, STONE	(3)		X
BITUMINOUS SUBSTRATE			
- Asphalt, bitumininous felts, bituminous coatings, granulated or smooth SBS & APP cap sheets	(2,3)	X	
ROOF TILES (UNGLAZED)	(3,4)		X
METALS			
- Aluminum, galvanized, cast iron, copper, lead, brass, stainless steel, steel, zinc	(3)	X	
PRE-COATED METAL	(3)		X
PAINTS	(3)		
- Paints & coatings	(3)		X
- Aluminized solar reflective coatings	(3)	X	
WOOD-TIMBER & PLYWOOD	(3)	X	X

(1) New cementitious substrates must be Portland base and be cured min. 28 days.
(2) The presence of volatiles may cause discoloration of Sikalastic if not properly primed.
(3) Surface evaluation and filed adhesion testing
(4) Glazed tile consult Sika
(5) Pressure treated lumber consult Sika

TOOLING AND FINISHING
See above.

REMOVAL
Remove liquid resin immediately with dry cloth. Once cured, resin can be removed by mechanical means.

OVER PAINTING
See above.

CLEAN UP

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

LOCAL RESTRICTIONS

Note that as a result of specific local regulations the declared data and recommended uses for this product may vary from country to country. Consult the local Product Data Sheet for exact product data and uses.

LEGAL NOTES

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