Product Data Sheet
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Construction

Sikalastic® 601 BC (US)

Durable and versatile base coat for Sikalastic® RoofPro roofing and waterproofing system

Description

Sikalastic® 601 BC (US) is a single-component, cold-applied, highly elastic, aliphatic, moisture-triggered polyurethane base coat designed for easy application as part of the Sikalastic® RoofPro roofing and waterproofing systems.

Where to Use

Sikalastic® RoofPro 10 and 15 year systems, including Sikalastic® RoofPro Direct, Recover, Inverted, Green and Built Up systems for both new construction and refurbishment

- Ideal for roofs displaying complex details and geometry or when accessibility is limited.
- Effective and cost efficient life cycle extension of existing roofs.
- Highly reflective Sikalastic® 621 TC (US) in White (RAL 9016) suitable for cool roofs and solar roof assemblies. See Sikalastic® 621 TC (US) Product Data Sheet.

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
- Moisture-triggered chemistry that becomes rapidly weatherproof after application
- Highly elastic and crack-bridging
- Seamless and fully adhered
- Vapour permeable
- Resistant to UV and common atmospheric chemicals

Approvals

- FM Approval Standard 4470 for Class 1 Roof Covers
- ASTM E-108-00 Spread of Flame meets Class A at a slope of 1 in 12
- Simulated wind uplift pull testing meets Class 1-990
- Simulated hail damage testing meets rating of SH
- Miami-Dade County NOA for Roof Maintenance Coating Systems and Roof Systems over Concrete and Steel Decks
- USGBC LEED rating: Conforms to LEED SS Credit 7.2 for Heat Island Effect - Roof with SRI >/=78
- Energy Star approval for Sikalastic® 621 TC (US) White (RAL 9016)
- Meets ASTM D7311-07: Standard Specification for Liquid-Applied, Single-Pack, Moisture-Triggered, Aliphatic Polyurethane Roofing Membrane.

Areas of Application

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.

Technical Data

Packaging	18.9 L (5 US gal.) pails
Colour	Oxide red
Shelf Life	6 months from date of production if stored in original, unopened and undamaged sealed packaging in dry conditions at temperatures between 4 - 30 °C (39 - 86 °F). Condition material to 18 - 30 °C (64 - 86 °F) before using.
Service Temperature	-30 to 80 °C (-22 to 176 °F)
Properties at 23 °C (73 °F) and 50 % R.H.	
Chemical Base	Single-component, moisture-triggered, aliphatic polyurethane
Density	1.36 kg/L (11.35 lb/US gal.) (all values at +23 °C)
Solids Content	78.0 % by volume / 84.3 % by weight
Flash Point	59 °C (138 °F)

Reinforced with Sika Reemat	RoofProMetal	RoofPro 10	RoofPro 15	RoofPro 20	RoofPro 25
Tensile Strength ASTM D2370	1400 psi	1300 psi	1350 psi	1750 psi	1500 psi
Tear Strength		3750 psi	4750 psi	6800 psi	7500 psi
Elongation ASTM D2370	250 %	35 %	45 %	50 %	75 %
Vapor Permeability	1.18 perms	0.56 perms	0.55 perms	0.49 perms	0.32 perms
VOC Content	212 g/L				

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.

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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 recommendations.

- Salt spray to ASTM B117 (1000 hours continuous exposure) and prohesion testing to ASTM G85-94: Annex A5 (1000 hours cyclic exposure.

Application

Substrate Evaluation

Cementitious substrates (e. g. Concrete)

New concrete should be allowed a minimum of 14 days before priming – ideally 28 days and should have a minimum tensile bond stength of 1.4 mpa (200 psi). 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 based roof boards

Roof boards should be clean, dry and dust free. Damaged or contaminated boards should be removed and replaced.

Brick and stone

Mortar joints must be sound and preferably flush-pointed.

Ceramic tiles

Ensure all tiles are sound and securely fastened, replacing obviously broken or missing sections.

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 prior to any coating works being carried out.

Bituminous felt

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

Bituminous coatings

Bituminous coatings should 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 panel roof 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” side should be positioned to receive the coating.

Plywood decks to receive coating directly should 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 to 6 mm (1/8 to 1/4 in) and fill with Sikaflex® sealant. Suitable edge support to prevent differential deflection between panels should be provided. Panel edges should be tongue and groove or supported on solid blocking. Space panels 3 to 4.7 mm (1/8 to 3/16 in) at panel ends, and fill joints flush with Sikaflex® sealant.

Paints and coatings

Ensure the existing material is sound and firmly adhered.

Existing Sikalastic RoofPro System

The existing Sikalastic® RoofPro System should still be soundly adhered to the substrate.

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Surface Preparation

Concrete and cementitious
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 (CSP 3-5 per ICRI guidelines). 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.
Repairs to the substrate, filling of joints, blowholes/voids and surface levelling must be carried out. Consult Sika Canada for product recommendations based on project requirements. High spots must be removed by grinding or similar method.
Outgassing is a naturally occurring phenomenon of concrete that can produce pinholes in applied coatings. The concrete must be carefully assessed for moisture content, air entrapment, and surface finish prior to any coating work. Particular requirements for priming must also be considered. Installing the membrane either when the concrete temperature is falling or stable can reduce outgassing. It is generally beneficial, therefore,
to apply the embedment coat in the late afternoon or evening.

Gypsum based roof boards
Roof boards should be clean, dry and dust free. Damaged or contaminated boards should be removed and replaced.

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

Ceramic tiles
Tiles must be well adhered to the substrate. Otherwise they need to be removed. 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 RoofPro system. Asphalt must be carefully assessed for moisture and/ or air entrapment, grade and surface finish prior to any coating works being carried out.

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. Where blasting is not permitted, clean metal preparation by pin hammer or other suitable means is acceptable.

Non-ferrous metals are prepared as follows. Remove any deposits of dust and oxidation and abrade 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 proprietary solution. Wash with detergent, rinse and dry.

Wooden substrates
Timber and timber based panel roof decks may require a complete layer of Sikalastic Baseply bonded using suitable adhesive prior to the application of the chosen system. The substrate should then be treated as a felt roof. Small timber protrusions and suitable decks may be treated directly, provided that the timber is of exterior quality, e.g. plywood, oil tempered hardboard, etc.

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

Sikaplan®/Sarnafil® membranes
Clean membranes with non-sudsing detergent and clean water rinse. Consult Sika regarding primer.

Existing Sikalastic RoofPro 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.

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Application

Priming

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

Sikalastic® RoofPro Priming Guide

Substrate	Remark	CONCRETE PRIMER	DTE EPOXY Primer	Bonding Primer	EP PRIMER/ SEALER	Consult Sika
CONCRETE	(1)	■	■	■	■	
LIGHTWEIGHT STRUCTURAL CONCRETE	(1)		■			■
GYPSUM-BASED ROOF BOARDS		■		■		
BRICK, STONE	(3)			■		■
BITUMINOUS SUBSTRATE						
-asphalt, bituminous felts, bituminous coatings, granulated or smooth SBS & APP cap sheets	(2,3)				■	
SINGLE-PLY ROOFING MEMBRANES						
-HYPALON, TPO, EPDM, PVC	(3)					■
ROOF TILES (UNGLAZED)	(3,4)			■		■
POLYESTER (GLASS FIBRE REINFORCED)	(3)			■		■
POLYURETHANE FOAM- sprayed or slab stock				■	■	
METALS						
-aluminum, galvanized steel, cast iron, cop- per, lead, brass, stainless steel, steel, zinc	(3)				■	
PRE-COATED METAL	(3)					■
PAINTS						
- paints & coatings	(3)			■		
- aluminized solar reflective coatings	(3)				■	
WOOD - TIMBER & PLYWOOD	(5)			■	■	■

(1) New cementitious substrates must be Portland-based and be cured at least 14 days.
(2) The presence of volatiles may cause discoloration of Sikalastic® if not properly primed.
(3) Surface evaulation and field adhesion testing.
(4) Glazed tile, consult Sika.
(5) Pressure-treated lumber, consult Sika

Detailing

Non-structural cracks up to 1.5 mm (1/16 in) - Detail application not necessary. Apply embedment/base coat per below.

Non-structural cracks between 1.5 and 6 mm (1/16 and 1/4 in) - Rout and seal with Sikaflex® sealant. Apply 40 - 45 mil detail coat embedded with 76 mm (3 in) Sika® Flexitape Heavy centered over crack. Apply embedment/base coat per below.

Cracks and joints between 6 and 25 mm (1/4 and 1 in) - Rout and seal with Sikaflex® sealant. Apply bond breaker tape sufficient to span width of crack or joint followed by 40 - 45 mil detail coat embedded with 152 mm (6 in) Sika® Flexitape Heavy centered over crack or joint. Apply embedment/base coat by terminating Sika® Reemat™ at edges of crack or joint overlapping Sika® Flexitape Heavy a minimum of 50 mm (2 in) on both sides.

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Joints greater than 25 mm (1 in) - Treat as expansion joint. Consult Sika for recommendations.

Metal, plywood and existing butiminous or single-ply seams - Apply 40 - 45 mil detail coat embedded with 76 or 152 mm (3 or 6 in) Sika® Flexitape Heavy centered over seam. Apply embedment coat per below.

Transitions between dissimilar materials - Apply 40 - 45 mil detail coat embedded with Sika® Flexitape Heavy centered over edge. Apply embedment coat per below.

Embedment/Base Coat

Mixing not required. Apply either Sikalastic® 601 BC or Sikalastic 621 TC per RoofPro System Guide at 45 mils with a 12.7 mm (1/2 in) inch nap phenolic resin core roller. Material can also be squeegee or spray applied, in which case it should be backrolled prior to embedding Sika® Reemat™. Place Sika® Reemat™ in wet base coat overlapping seams a minimum of 50 mm (2 in) (place frayed edge over cut edge of roll) and apply wet roller to topside to saturate completely. After approximately 5 minutes the binder will begin to dissolve allowing the fiber strands to conform to irregular surfaces. Do not over work once the fibers have conformed to the substrate. Allow to cure 12 hours at 21 °C (70 °F) and 50 % RH or until tack-free before top coating. Keep clean and dry and apply top coat within 7 days. If window exceeded clean with non-sudsing detergent and clean water rinse and allow to dry prior to application of Sika® Reactivation Primer.

Top Coats

Mixing not required. Apply Sikalastic® 621 TC at the coverage rate in the RoofPro System Guide with a 12.7 mm (1/2 in) nap phenolic resin core roller. Material can also be squeegee or spray applied, in which case it should also be backrolled. In the case of RoofPro 25 allow the first top coat to cure 12 hours at 21 °C (70 °F) and 50 % RH or until tack free before applying second top coat. On top of the complete RoofPro system additional top coats may be applied with aggregate for slip resistance - consult Sika Canada for recommendations. Keep clean and dry and apply top coat within 7 days. If window exceeded clean with non-sudsing detergent and clean water rinse and allow to dry prior to application of Sika® Reactivation Primer.

Sikalastic® RoofPro System Guide					
	RoofPro Metal	**RoofPro 10**	**RoofPro 15**	**RoofPro 20**	**RoofPro 25**
Substrates	Qualifying Metals	Concrete or cementitious, metals, wood, single-ply or bituminous, spray foam, stone or tile			
Primer	Required - see Substrate Priming Guide				
Detailing	Sika® Flexitape Heavy centered over seams, transitions and properly treated cracks and joints				
Reinforcement	Local with Sika® Flexitape	Sika® Reemat™ Standard	Sika® Reemat™ Premium embedded in base over entire surface		
601 BC (US)*		35 mils wet - 45 ft²/US gal.	45 mils wet - 35 ft²/US gal.		45 mils wet - 35 ft²/US gal.
621 TC (US)	20 mils wet - 80 ft²/US gal.	30 mils wet - 53 ft²/US gal.	30 mils wet - 53 ft²/US gal.	45 mils wet - 35 ft²/US gal.	
621 TC (US)	20 mils wet - 80 ft²/US gal.			30 mils wet - 53 ft²/US gal.	30 mils wet - 53 ft²/US gal.
621 TC (US)					30 mils wet - 53 ft²/US gal.
Total Film Thickness	32 mils dry	52 mils dry	59 mils dry	61 mils dry	84 mils dry
* May be substituted with Sikalastic® 621 TC (US)					

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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 temperature during application and curing of material is 5 °C (41 °F); maximum is 35 °C (95 °F). Sufaces temperatures must be no higher than 60 °C (140 °F). Frequent monitoring of ambient and substrate temperature should always be done when applying polyurethane coatings. 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 greater than 4 % by weight.
- Minimum age of concrete must be 21 - 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 porous or damp surface where moisture vapor transmission will occur during application and cure.
- 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 prolems.
- On substrates likely to exhibit outgassing apply during falling ambient and substrate temperature. If applied during rising temperature pinholing may occur.
- Use sunglasses with UV filter when applying highly reflective Sikalastic® 621 TC White (RAL 9016).
- Do not use for indoor applications.
- Not recommended for direct exposure to heavy or frequent foot traffic.
- Do not apply cementitious products, such as tile mortar directly onto Sikalastic® 601 BC. See Sikalastic® 624 AR Product Data Sheet.
- Areas with high movement or irregular substrates require a complete layer of Sikalastic® Baseply.
- Any repairs required to achieve a level surface must be performed prior to application (consult a Sika Canada 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 is recommened.
- Opening to traffic prior to cure may result in loss of aggregate or permanent staining and subsequent premature failure.
- On grade, unvented metal pan, split/sandwich slab and buried membrane conditions as well as light weight concrete should not be coated with Sikalastic® RoofPro systems.
- Do not subject to continuous immersion.
- 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.

Health and Safety Information

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

KEEP OUT OF REACH OF CHILDREN
FOR INDUSTRIAL USE ONLY

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