

# Sikafloor® PurCem® 19N

## Heavy Duty Trowel Applied Cementitious Urethane Mortar

<b>Description</b>	Sikafloor PurCem 19N is a trowel grade, heavy duty, solid color, three-component, cementitious urethane mortar designed to provide excellent resistance to thermal stress, abrasion, impact and chemical attack. Sikafloor PurCem 19N has a slightly textured aggregate surface providing increased slip resistance. System is typically installed at 1/4 to 3/8 in (6-9 mm) thickness.
<b>Where to Use</b>	<ul style="list-style-type: none"> <li>■ Sikafloor PurCem 19N floors are primarily used to protect concrete substrates, but are equally effective over most metallic and wood surfaces.</li> <li>■ Suitable for both interior and exterior exposures.</li> <li>■ Typically used in food processing plants, wet and dry process areas, freezers and coolers, thermal shock areas, dairies, breweries, wineries, distilleries, laboratories, chemical process plants, pulp and paper plants, warehouses and storage areas.</li> </ul>
<b>Advantages</b>	<ul style="list-style-type: none"> <li>■ Resists a wide range of organic and inorganic acids, alkalis, amines, salts and solvents. Refer to the Sikafloor PurCem Chemical Resistance Chart. Consult Sika Technical Service for additional information.</li> <li>■ Natural textured surface provides anti-slip surface.</li> <li>■ Rapid one-step application. No concrete primer or topcoat sealer required. Production downtime is minimized.</li> <li>■ Similar coefficient of thermal expansion to concrete, allowing movement with the substrate through normal thermal cycling. It will perform and retain its physical characteristics through a wide temperature range from -40°F (-40°C) up to live steam 240°F (115°C).</li> <li>■ Non-taint, odorless.</li> <li>■ Can be applied over partially cured concrete slabs (&lt;10% moisture), full 28 day cure time is not necessary.</li> <li>■ Minimal maintenance costs, superior life cycle cost advantage versus tile.</li> <li>■ Meets USDA requirements for incidental food contact.</li> </ul>

### How to Use Surface Preparation

Concrete Surfaces must be clean and sound. Remove all dust, dirt, existing paint films, efflorescence, exudates, laitance, forms oils, hydraulic or fuel oils, brake fluid, grease, fungus, mildew, biological residues or any other contaminants which may prohibit good bond. Prepare the surface by appropriate mechanical means, i.e., steel shotblasting or planetary grinding (CSP 3-6). The compressive strength of the concrete substrate should be at least 3500 psi (24 MPa) at 28 days and a minimum of 250 psi (1.7 MPa) in tension at the time of application. Repairs to cementitious substrates, filling of blowholes, leveling of irregularities, etc. should be carried out using an appropriate Sika product. Contact Sika Technical Service for recommendations. **Edge Terminations** - All free edges of a Sikafloor PurCem floor, whether at the perimeter, along gutters or at drains require extra anchorage to distribute mechanical and thermal stresses. This is best achieved by forming or cutting grooves in the concrete. Grooves should have a depth and width of 2 times thickness of the PurCem floor. Refer to the edge details provided. If necessary, protect all free edges with mechanically attached metal strips. Never featheredge, always turn into an anchor groove. **Expansion Joints** - Should be provided in the substrates at the intersection of dissimilar materials. Isolate areas subject to thermal stresses, vibration movements or around loadbearing columns and at vessel sealing rings. Refer to details. **Priming** - Priming of concrete substrates is not usually required under typical circumstances. However, due to variations in concrete quality, surface conditions, surface preparation and ambient conditions, reference test areas are recommended to determine whether priming is required to prevent the possibility of blisters, debonding, pinholes and other aesthetic variations.

### Typical Data

<b>Packaging</b>	66.5 lbs/3.75 gal, (30.3 kg/14.3L) unit: 1 jug (A), 1 jug (B) and 1 jug (C) Component A: Carton containing (4)* jugs Component B: Carton containing (4)* jugs Component C: 48 lb bag * Order one carton of Part A (4 Jugs per carton), one carton of Part B (4 jugs per carton) and 4 bags of Part C.
<b>Colors</b>	Four standard stock colors: Telegray 2 (RAL 7046)    Oxide Red 3009 Agate Gray (RAL 7038)    Beige (1001) Two standard, non-stocking colors that require lead time: Sky Blue (RAL 5015)    Grass Green (RAL 6010) Custom colors subject to minimum orders.
<b>Yield</b>	Approx. 22.5 ft <sup>2</sup> (2 m <sup>2</sup> ) per unit at 1/4 in. (6 mm) Approx. 14.5 ft <sup>2</sup> (1.3 m <sup>2</sup> ) per unit at 3/8 in. (9 mm) (These figures do not allow for surface porosity, profile or wastage)
<b>Shelf Life</b>	Component A & B: 1 year in original unopened packaging. Component C: 6 months in original unopened packaging. Store dry between 50°-75°F (10°-25°C). Protect from freezing.

<b>Mixing Ratio</b>	Components A:B:C = Mix full units only.
<b>Properties at 73°F (23°C) and 50% R.H.</b>	
<b>Application Temperature</b>	45°F (7°C) min. / 85°F (30°C) max.
<b>Density ASTM C 905</b>	17.69 lb/gal. (2.12 kg/L)
<b>Service Temperature</b>	-40°F (-40°C) min. / 240°F (115°C) max.
<b>Curing Time at 68°F (20°C) at 1/4 in. (6 mm)</b>	
Usable pot life	15-20 min.
Initial joint up time	20-25 min.
Cure to foot traffic	10-12 hrs.
Cure to light traffic	16-18 hrs.
Full cure	5 days
<b>Compressive Strength ASTM C 579</b>	6,508 psi
<b>Tensile Strength (ASTM C 307)</b>	814 psi
<b>Flexural Strength (ASTM C 580)</b>	1635 psi
<b>Bond Strength (ASTM D 4541)</b>	> 250 psi (1.75 MPa) (substrate failure)
<b>Hardness, Shore D (ASTM D 2240)</b>	80-85
<b>Indentation (MIL-PRF-24613)</b>	~ 0%
<b>Impact Resistance (ASTM D 2794)</b>	4.18 ft/lbf (5.67 joules) at 1/8 in (3 mm) of thickness
<b>Abrasion Resistance (ASTM D 4060)</b>	
H-22/1000 cycles/1000 g	-2.18 g
CS-17/1000 cycles/1000 g	0.155 g
<b>Coefficient of Friction (ASTM D 1894)</b>	0.7
<b>Coefficient of Thermal Expansion (ASTM D 696)</b>	1.06 x 10 <sup>-5</sup> in/in/°F (1.9 x 10 <sup>-5</sup> mm/mm/°C)
<b>Water Absorption (ASTM C 413)</b>	0.28%
<b>Flexural Modulus (ASTM C580)</b>	629025 psi (4335.7MPa)

**Mixing** Mixing will be affected by temperature; condition materials for use to 60-70°F (15-21°C). Premix Components A and B separately, make sure all pigment is uniformly distributed. Start mixer; add Components A and B, blend for 30 seconds. Add Component C (powder) pouring slowly over a period of 15 seconds. **DON'T DUMP!** Allow Component C to further blend for 2 more minutes to ensure complete mixing and that all powders are wetted out. During the operations, scrape down the sides and bottom of the container with a flat or straight edge trowel at least once to ensure complete mixing (Components A+B+C). *Mix full units only.*

**Application** PurCem 19N trowel grade materials are applied with normal steel plastering or cement-finishing trowels and or a power trowel. Do not use in serrated hand trowels. There is sufficient resin in the system to wet the concrete (no primer). required under normal circumstances. A Screed Box is used to apply the mixed material to the floor. After screeding the PurCem 19N, steel finishing trowels are used to compact and smooth the surface of the material. If the mortar "pulls", creating a rough or open surface, either the trowel has become sticky or it is being held at the wrong angle. Once the mortar is relatively closed, roll the surface with a plastic loop or short mohair roller to remove any imperfections or trowel marks. Excessive trowelling or rolling will bring more resin to the surface, reducing the anti-slip surface.

- Limitations**
- **IMPORTANT:** Product must be protected from freezing. If frozen, discard.
  - Do not apply below 45°F (7°C) or above 85°F (29°C) / maximum relative humidity 85%.
  - Do not apply thicker than maximum recommended thickness of 3/8".
  - Do not apply to un-reinforced sand cement screeds, asphaltic or bitumen substrate, glazed tile or non-porous brick, tile, and magnesite, copper, aluminium, soft wood, or urethane composition, elastomeric membranes, fiber reinforced polyester (FRP) composites, epoxy mortars or coatings.
  - Do not apply to wet or green concrete or polymer modified patches if the moisture content is > 10%.
  - Do not apply to concrete if air or substrate temperature is within 5°F (3°C) of dew point.
  - Protect substrate during application from condensation from pipes or any overhead leaks.
  - Do not apply to vertical or overhead surfaces. For vertical surfaces, refer to Sikafloor PurCem 29N.
  - Do not featheredge.
  - Do not mix Sikafloor PurCem materials by hand. Mechanical mix only.
  - Color uniformity cannot be completely guaranteed from batch to batch (numbered). Take care when using Sika PurCem products to draw from inventory in batch number sequence, do not mix batch numbers in a single floor area.

**Caution** **A - CAUTION: IRRITANT.** Contains Polyester/Polyether Polyol dispersed in water (Mixture). May cause eye/skin/respiratory irritation. May be harmful if swallowed. Intentional misuse by deliberate concentration and inhalation of vapors may be harmful or fatal.

**B - WARNING: IRRITANT, SENSITIZER.** Contains Polymeric Diphenylmethane Diisocyanate (CAS 9016-87-9). Causes eye/skin/respiratory irritation. Prolonged and/or repeated contact with skin or by inhalation may cause allergic reaction/sensitization. May be harmful if swallowed.

**C - WARNING: IRRITANT, SENSITIZER.** Contains Silica Quartz (CAS 14808-60-7) and Portland Cement (CAS 65997-15-1). Causes eye irritation. May cause skin/respiratory irritation. Prolonged and/or repeated skin contact may cause an allergic reaction/sensitization. May cause delayed lung damage (silicosis). May be harmful if swallowed. Deliberate misuse by inhalation of vapors may be harmful or fatal. Strictly follow all usage, handling and storage instructions

**WARNING:** This product contains a chemical known to the State of California to cause cancer.



# Industrial Flooring

<b>First Aid</b>	<b>Eyes</b> - Hold eyelids apart and flush thoroughly with water for 15 minutes. <b>Skin</b> - Remove contaminated clothing. Wash skin thoroughly for 15 minutes with soap and water. <b>Inhalation</b> - Remove to fresh air. <b>Ingestion</b> - Do not induce vomiting. Dilute with water. Contact physician. In all cases contact a physician immediately if symptoms persist.
<b>Handling and Storage</b>	Avoid direct contact with eyes and skin. Wear chemical resistant gloves/goggles/clothing. Avoid breathing vapors. Use with adequate general and local ventilation. In absence of adequate ventilation, use properly fitted NIOSH approved respirator. Wash thoroughly after handling product. Store in a cool, dry, well ventilated area. Keep containers tightly closed.
<b>Clean Up</b>	Wear chemical resistant gloves/goggles/clothing. In absence of proper ventilation use properly fitted NIOSH respirator. Uncured material can be removed with approved solvent. Follow solvent manufacturer's instructions for use and warnings. Cured material (when Component 'A' combined with Component 'B' and Component 'C') can only be removed mechanically. In case of spill, ventilate area and contain spill. Collect with absorbent material (Component 'A' and Component 'B') and place in properly sealed container. Shovel Component 'C' into approved container. Dispose of in accordance with current applicable local, state and federal regulations.

**KEEP CONTAINER TIGHTLY CLOSED • KEEP OUT OF REACH OF CHILDREN • NOT FOR INTERNAL CONSUMPTION • FOR INDUSTRIAL USE ONLY**

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Sika warrants this product for one year from date of installation to be free from manufacturing defects and to meet the technical properties on the current Technical Data Sheet if used as directed within shelf life. User determines suitability of product for intended use and assumes all risks. Buyer's sole remedy shall be limited to the purchase price or replacement of product exclusive of labor or cost of labor.

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1-800-933-SIKA NATIONWIDE

**Regional Information and Sales Centers.** For the location of your nearest Sika sales office, contact your regional center.

**Sika Corporation**  
201 Polito Avenue  
Lyndhurst, NJ 07071  
Phone: 800-933-7452  
Fax: 201-933-6225

**Sika Canada Inc.**  
601 Delmar Avenue  
Pointe Claire  
Quebec H9R 4A9  
Phone: 514-697-2610  
Fax: 514-694-2792

**Sika Mexicana S.A. de C.V.**  
Carretera Libre Celaya Km. 8.5  
Fracc. Industrial Balvanera  
Corregidora, Queretaro  
C.P. 76920  
Phone: 52 442 2385800  
Fax: 52 442 2250537

