

## Sikafloor® PurCem® 22N

### Medium Duty, Self-leveling Broadcast Cementitious Urethane Slurry

<b>Description</b>	Sikafloor PurCem 22N is a self-leveling, medium to heavy duty, solid colored, three component, cementitious urethane slurry designed to provide excellent resistance to abrasion, impact, and chemical attack. Sikafloor PurCem 22N is broadcast with dried silica sand and sealed with PurCem 31N to produce a solid color finish, or can be broadcasted with colored quartz aggregate and sealed with Sikafloor 510 clear polyaspartic topcoat for a decorative finish. The system is typically installed at 3/16 to 1/4 in. (4.5-6 mm) thickness.
<b>Where to Use</b>	<ul style="list-style-type: none"> <li>■ Sikafloor PurCem 22N floors are primarily used to protect concrete substrates, but are equally effective over most metallic and wood surfaces.</li> <li>■ Typically used in food processing plants, wet and dry process areas, freezers and coolers, 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 very 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>■ Textured surface provides anti-slip surface.</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 212°F (100°C).</li> <li>■ Non-tainting, 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>
<b>How to Use</b>	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 3,500 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. <b>Edge Terminations</b> - 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. <b>Expansion Joints</b> - Should be provided in the substrates at the intersection of dissimilar materials. Isolate areas subject to thermal stresses, vibration movements or around load-bearing columns and at vessel sealing rings. Refer to details. <b>Priming</b> of concrete substrates is not usually required or recommended under typical circumstances. Do not apply over epoxy primer.
<b>Surface Preparation</b>	

#### Typical Data

<b>Packaging</b>	43.4 lbs/2.6 gal, (19.7 kg/9.9 L) unit: 1 jug (A), 1 jug (B) and 1 bag (C) Component A: Carton containing (4)* jugs Component B: Carton containing (4)* jugs Component C: 45 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: Telegay 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 order.
<b>Yield</b>	Approx. 22.5 ft <sup>2</sup> (2 m <sup>2</sup> ) per unit at 3/16 in. (4.5 mm) Approx. 16.5 ft <sup>2</sup> (1.5 m <sup>2</sup> ) per unit at 1/4 in. (6 mm) (These figures do not allow for surface porosity, profile or wastage)
<b>Shelf Life</b>	Components A+B: 1 year in original unopened packaging. Component C: 6 months in original unopened packaging. Store dry between 50°-77°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 min., 86°F max. (7°C min., 30°C max.)
<b>Density (ASTM C-905)</b>	16.11 lbs./gal. (1.93 kg/L)
<b>Service Temperature</b>	-40°F (-40°C) min. / 212°F (100°C) max.
<b>Curing Time at 68°F (20°C) / 1/4 in. (6 mm)</b>	
Usable pot life	20-25 min.
Initial joint up time	25-30 min.
Cure to foot traffic	10-12 hrs.
Cure to light traffic	14-16 hrs.
Full Cure 5 days	
<b>Compressive Strength (ASTM C-579)</b>	7114 psi
<b>Tensile Strength (ASTM C-307)</b>	1045 psi
<b>Flexural Strength (ASTM C-580)</b>	2314 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>	5.02 ft/lbf (6.81 joules) at 1/8 in. (3 mm) of thickness
<b>Abrasion Resistance (ASTM D-4060)</b>	
H-22/1000 cycles/1000 g	-2.26 g
CS-17/1000 cycles/1000 g	0.110 g
<b>Coefficient of Friction (ASTM D-1894-61T)</b>	0.8
<b>Coefficient of Thermal Expansion (ASTM D-696)</b>	0.89 x 10 <sup>-5</sup> in./in./°F (1.6 x 10 <sup>-5</sup> mm/mm/°C)
<b>Water Absorption (ASTM C-413)</b>	0.10%

## Application

**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. Full 2 minute mix is required for proper flow and finish. During the operations, scrape down the sides and bottom of the container with a flat or straight edge trowel at least once (Components A+B+C) to ensure complete mixing. *Mix full units only, do not break down individual units.*

Mix and pour the Sikafloor PurCem 22N materials on the floor. Spread to the desired thickness using a screed rake or trowel. Take care to spread newly mixed materials across the transition of previous applied mixes before the surface begins to set. Immediately spike roll the surface to release trapped air in the matrix. Sikafloor PurCem 22N requires the wet surface to be broadcast to rejection with quartz or mineral aggregates. Aggregate must fall vertically to avoid surface defects / do not broadcast up to the transition line of new mixes, always broadcast 2-3 feet beyond the wet edge. Allow broadcast surface to cure sufficiently to be able to resist foot traffic without damaging the surface. Remove excess aggregate by sweeping or vacuuming until surface is free of all loose particles and dust. A topcoat of Sikafloor PurCem 31N can be applied to lock in the aggregate. Allow a minimum 24 hour cure period at 68°F (20°C) before light traffic after the Sikafloor PurCem 31 N is applied. Sikafloor 22N PurCem Colored Quartz: Application method is the same as described above. Instead of a topcoat of Sikafloor PurCem 31N, seal the surface using a clear polyaspartic Sikafloor 510 (see product data sheets). Apply Sikafloor 510 top coat by squeegee and roller to provide a uniform coverage without ponding. When required, apply a second coat to achieve a specific texture. Allow a minimum 24 hour cure period at 68°F (20°C) before light traffic.

## 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 finished thickness of 1/4 inch after broadcast.
- 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 or 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.

# Industrial Flooring

<b>Caution</b>	<p><b>A - CAUTION: IRRITANT.</b> 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.</p> <p><b>B - WARNING: IRRITANT, SENSITIZER.</b> 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.</p> <p><b>C - WARNING: IRRITANT, SENSITIZER.</b> 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</p> <p><b>WARNING:</b> This product contains a chemical known to the State of California to cause cancer.</p>
<b>First Aid</b>	<p><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.</p>
<b>Handling and Storage</b>	<p>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.</p>
<b>Clean Up</b>	<p>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.</p>

**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. **NO OTHER WARRANTIES EXPRESS OR IMPLIED SHALL APPLY INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. SIKA SHALL NOT BE LIABLE UNDER ANY LEGAL THEORY FOR SPECIAL OR CONSEQUENTIAL DAMAGES. SIKA SHALL NOT BE RESPONSIBLE FOR THE USE OF THIS PRODUCT IN A MANNER TO INFRINGE ON ANY PATENT OR ANY OTHER INTELLECTUAL PROPERTY RIGHTS HELD BY OTHERS.**

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