

Sikafloor®-24N PurCem (CN)

Medium Duty Self-Levelling Polyurethane Screed

Product Description	Sikafloor®-24N PurCem (CN) is self-levelling, medium duty, coloured, four - component, odourless, water dispersed polyurethane-based / cement and aggregate screeds designed to provide good resistance to abrasion, impact, chemical attack and other physical aggression. Sikafloor® 24N Purcem (CN) has an aesthetic, easy to clean, smooth aggregate texture. The system is typically installed at 2 to 6 mm thickness.
Uses	Typically used in food processing plants, wet & dry process areas, freezers & coolers, dairies, breweries, wineries, distilleries, laboratories, chemical process plants, pulp and paper plants, warehouses and storage areas.
Characteristics / Advantages	<ul style="list-style-type: none">■ Resists a very wide range of organic and inorganic acids, alkalis, amines, salts and solvents. Consult Sika Technical Sales for full details. Refer to the Sikafloor® PurCem (CN) Chemical Resistance Chart.■ 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 -20°C up to 80°C.■ Bond strength in excess of the tensile strength of concrete, concrete will fail first.■ High abrasion qualities result from its pure silica aggregate structure.■ Extra Expansion joints are not necessary; simply maintain and extend existing expansion joints up through the Sikafloor® PurCem (CN) Flooring System.■ Easily maintained.
Test	
Approval / Standards	ISEGA – Germany Food Stuff Contact Compliance. Certificate No: 32054 U 11 Product performances Test. Certificate No: GD2010-10-00222
Technical Data	
Packaging	Component A: 5 kg/pail Component B: 5 kg/pail Component C: 21.8 kg/bag, Component D: 1.6 kg/bag
Colour	Seven standard colours are available (all are approximate): Beige, Maize Yellow, Oxide Red, Grass Green, Slate Grey, Dusty Grey, Traffic Grey Custom colors subject to minimum orders.
Yield	Approximately 2.0 kg/m ² /mm Approximately 8.65 m ² per unit at 2 mm Approximately 4.32 m ² per unit at 4 mm (These figures do not allow for surface porosity, profile or wastage)
Shelf Life	Components A+B: 1 year in original unopened packaging. Component C and D : 6 months in original unopened packaging. Store dry between 18 °C - 25 °C. Protect from freezing.
Mix Ratio	Components A:B:C:D = Mix full units only.

Construction



Properties at 23°C and 50% R.H.

Application Temperature	10°C min. / 30°C max. Optimal application temperatures range : 15°C - 25°C		
Density ASTM C 905	1.93 kg/L		
Flow ASTM C230	330 mm		
Service Temperature	Typical service temperature range: -5°C min. / 70°C max. The product will retain its physical characteristics up to -20°C service temperature however at such low temperature the Sikafloor 24N Purcem (CN) system thickness must be increased (typically to 2 mm scratch coat + 4 mm body coat) in order to withstand heavy wear and/or impact. Temporary exposure to +80°C is also possible when system building is at least 4 mm thick. For exposure to higher temperature, please consult us. The product is not designed to withstand thermal shock. Hot steam cleaning is not recommended.		
Cure Time at	Working Time	20-25 min	at 20°C
	Initial join up time	25-30 min	at 20°C / 4 mm
	Cure to foot traffic	10-12 h	at 20°C / 4 mm
	Cure to light traffic	14-16 h	at 20°C / 4 mm
	Full cure	5 days	at 20°C / 4 mm
	Note: At low temperature the curing need longer time.		
Softening Point	130 °C		
Compressive Strength ASTM C579	24 h	27 MPa	
	7 days	37 MPa	
	28 days	40 MPa	
Tensile Strength ASTM C 307	6.5 MPa		
Flexural Strength ASTM C 580	14.7 MPa		
Bond Strength ASTM D 4541	> 1.75 MPa (substrate failure)		
Hardness, Shore D ASTM D 2240	80-85		
Impact Resistance ASTM D 2794	6.81 joules at 3 mm of thickness		
Abrasion Resistance ASTM D 4060	-2.26 g		
H-22/1000 cycles/1000 g			
Coefficient of Friction ASTM D 1894-61T	Steel	0.3	
	Rubber	0.5	
Coefficient of Thermal Expansion ASTM D 696	1.6×10^{-5} mm/mm/°C		
Water Absorption ASTM C 413	0.10%		
VOC (GB/T 22374-2008)	< 30 g/L		
Chemical Resistance	Consult Sika Technical Sales		

How to Use

Surface Quality and Preparation	<p>The concrete substrate must be sound and of sufficient compressive strength (minimum 25 N/mm²) with a minimum pull off strength of 1.5 N/mm².</p> <p>The substrate must be clean and dry (when using primer of Sikafloor -156/-161, the moisture content should be < 4%) and free of all contaminants such as oil, grease, coatings and surface treatments, etc.</p> <p>Remove all dust, dirt, existing paint films, efflorescence, exudates, laitance, form</p>
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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, approved by Sika to achieve (CSP 3-9). Repairs to cementitious substrates, filling of blowholes, leveling of irregularities, etc. should be carried out using an appropriate Sika profiling mortar. Contact Sika Technical Sales for a recommendation.

Edge Terminations - All free edges of a Sikafloor® PurCem (CN), 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 Sikafloor® PurCem (CN) mortar. 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 load-bearing columns and at vessel sealing rings. Refer to details.

Mixing

Mixing will be affected by temperature; condition materials for use from 15°C to 25°C. Premix components A and B separately, make sure all pigment is uniformly distributed.

Start mixer; stir for 20 seconds component A, then add component B and mix for 30 seconds. Add component C (powder) and component D (pigment powder) together, pouring slowly over a period of 15 seconds. **DON'T DUMP!** Allow component C and D to further mix for 2 more minutes to ensure complete mixing. 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+D) to ensure complete mixing. **Mix full units only.**

Note: Improve flowability on cool substrates can be achieved by removing a maximum of 1 kg of Component C (powder) per unit.

Application

Sikafloor® -24N PurCem (CN)

Priming – Use of Sikafloor® -156/-161 primer or a scratch coat of Sikafloor®-24N PurCem (CN) is mandatory. (please consult Sikafloor® -156/-161 product data sheet for details on mixing and application).

Sikafloor® -156/-161 primer is applied at rate of 0.3 to 0.5 kg/m². (Depending on substrate conditions). Sikafloor 156 primer shall be lightly broadcast with quartz sand 0.4-0.7 mm.

Before applying Sikafloor® 24N Purcem (CN) on Sikafloor® -156/-161 slightly broadcast, allow:

Substrate temperature	Waiting time	
	Minimum	Maximum
+10°C	24 hours	12 days
+20°C	12 hours	7 days
+30°C	6 hours	4 days

Alternatively, if a scratch coat of Sikafloor® 24N Purcem (CN) is applied (at typical rate of 2 kg/m²), it shall be let cured overnight (~14 hours at 20°C) prior the body coat application. (Note: Using Scratch coat of Sikafloor 24N Purcem (CN) is particularly suitable when designed total build-up is 6 mm thick)

Sikafloor 24N Purcem (CN) - Mix and pour the Sikafloor®-24N PurCem (CN) materials on the floor. Spread to the desired thickness using a notched squeegee, trowel or screed bar. 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.

Respect curing times, prior to open Sikafloor 24N Purcem (CN) to traffic.

Clean Up

Clean all tools and equipment with Sika® Equipment Cleaner/Epoxy Thinner. Wash soiled hands and skin thoroughly in hot soapy water or use Sika® Hand Cleaner. Once hardened, product can only be removed mechanically.

Maintenance

Sikafloor® PurCem (CN) floors are easily cleaned using a stiff brushing action and or high-pressure water, preferably hot, and even live steam. Degreasing agents and detergents will assist, but do not use any compounds containing Phenol as the floor colour may be damaged. Consult the cleaning compound manufacturer's printing directions before use.

Limitations	<ul style="list-style-type: none"> ■ Do not apply below 10° C or above 30° C / maximum relative humidity 85%. ■ 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, fibre reinforced polyester (FRP) composites. ■ Do not apply to wet or green concrete or polymer modified patches if the moisture content >10%. ■ Do not apply to concrete if air or substrate temperature is within 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® 29N PurCem (CN). ■ Do not featheredge. ■ Do not mix Sikafloor® PurCem materials by hand / mechanical mix only. ■ Do not apply to cracked or unsound substrates. ■ Do not apply to surfaces where moisture vapour can condense and freeze. ■ Steam cleaning may lead to delamination due to thermal shock (Use Sikafloor®-19N PurCem (CN) or Sikafloor®-20N PurCem (CN)). ■ Colour uniformity cannot be completely guaranteed from batch to batch (numbered). Take care when using Sikafloor® PurCem products to draw from inventory in batch number sequence, do not mix batch numbers in a single floor area. ■ Always allow a minimum of 48 hours after product application prior to placing into service in proximity with food stuffs. ■ Products of the Sikafloor® - PurCem® (CN) product range are subject to yellowing when exposed to UV radiation. There are no measurable losses of other properties when this occurs and it is a purely aesthetical matter. Products can be used outside provided the change in appearance is acceptable by the customer.
Caution	<p>Component A - Frequent or prolonged skin contact may cause some local short term skin irritation. Avoid eyes contact, may cause slight transient irritation.</p> <p>Component B - Harmful by inhalation. Irritating to eyes, respiratory system and skin. May cause sensitization by inhalation and skin contact.</p> <p>Component C and D- Risk of serious damage to eyes. In case of contact with eyes, rinse immediately with plenty of water. May cause skin irritation. Avoid breathing dusts. Respirable dusts could if inhaled over a prolonged period constitute a health hazard.</p> <p>Consult product label for additional information.</p>
First Aid	<p>In case of skin contact, wash thoroughly with soap and water. For eye contact, flush immediately with plenty of water for at least 15 minutes. Contact a physician immediately. For respiratory problems, transport victim to fresh air.</p> <p>For more information, consult Sika Material Safety Data Sheet.</p>
Value Base	<p>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.</p>
Local Restrictions	<p>Please note that as a result of specific local regulations the performance of this product may vary from country to country. Please consult the local Product Data Sheet for the exact description of the application fields.</p>
Health and Safety Information	<p>For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Material Safety Data Sheet containing physical, ecological, toxicological and other safety-related data.</p>

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Notes:

The information, and, in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.

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ISO 9001: 2008
Certificate No.:CC3576



ISO 14001:2004
Certificate No.:CC3577

The product is manufactured under a HKQAA ISO9001/ISO14001 certified quality/environmental management system.



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