

Sikafloor® -24N PurCem

Medium Duty Self-Levelling Polyurethane Screed

Product Description	Sikafloor®-24N PurCem are self-levelling, medium duty, solid colour, three - component, 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 has an aesthetic, easy to clean, smooth aggregate texture. The systems are typically installed at 2 to 4 mm thickness.
Uses	<ul style="list-style-type: none"> ■ 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 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 -18°C up to 65°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 Flooring System. ■ Easily maintained.
Technical Data	
Packaging	Component A: 3.22 kg/pail Component B: 2.98 kg/pail Component C: 13.71 kg/bag
Colour	Standard colours are available : Cream, Grey, Light Grey, Green, Red Custom colours subject to minimum orders.
Shelf Life	Components A+B: 1year in original unopened packaging. Component C: 6 months in original unopened packaging. Store dry between 10 °C – 30 °C. Protect from freezing.
Mix Ratio	Components A:B:C = Mix full units only.
Properties at 23°C and 50% R.H.	
Application Temperature	10°C min. / 30°C max.
Density ASTM C 905	1.93 kg/L
Flow ASTM C230	310 - 330 mm
Service Temperature	<p>Typical service temperature range: -5°C min. / 65°C max.</p> <p>The product will retain its physical characteristics up to -18°C service temperature however at such low temperature the Sikafloor® 24N Purcem system thickness must be increased (typically to 2 mm scratch coat + 4 mm body coat) in order to withstand heavy wear and/or impact.</p> <p>Temporary exposure to +80°C is also possible when system building is at least 4 mm thick.</p> <p>The product is not designed to withstand thermal shock.</p> <p>Hot steam cleaning is not recommended</p>



Cure Time at	Usable pot life	15-20 min	at 30°C
	Initial join up time	10-15 min	at 30°C / 4 mm
	Cure to foot traffic	8-12 h	at 30°C / 4 mm
	Cure to light traffic	12-14 h	at 30°C / 4 mm
	Full cure	4 days	at 30°C / 4 mm
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 H-22/1000 cycles/1000 g	-2.26 g		
Coefficient of Friction ASTM D 1894-61T	Steel	0.3	
	Rubber	0.5	
Coefficient of Thermal Expansion ASTM D 696	1.6 x 10 ⁻⁵ mm/mm/°C		
Water Absorption ASTM C 413	0.10%		
VOC (GB/T 22374-2008)	< 20 g/L		
Chemical Resistance	Consult Sika Technical Sales		

How to Use

Surface Quality and Preparation

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.

The substrate must be clean and dry (moisture content < 4%) and free of all contaminants such as oil, grease, coatings and surface treatments, etc.

Remove all dust, dirt, existing paint films, efflorescence, exudates, laitance, form 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, 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 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 of Sikafloor® 24 N

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 10 seconds component A, then add component B and mix for 30 seconds. Add component C (powder) together, mixing together over a period of 2 minutes. **DON'T DUMP!**

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.**

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 (ID)**

Priming – Use of Sikafloor® -155WN/-161 HC or a scratch coat of Sikafloor® 24N Purcem is mandatory. (please consult Sikafloor® -155WN/-161HC product data sheet for details on mixing and application).

Sikafloor® -155WN/-161 HC primer is applied at rate of 0.3 to 0.5 kg/m². (depending on substrate conditions). Sikafloor® 155WN/161 HC primer shall be slightly broadcast with Sikadur 508.

Before applying Sikafloor® 24N Purcem on Sikafloor® -161 lightly 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

Before applying Sikafloor® 24N Purcem on Sikafloor® -155WN lightly broadcast, allow:

Substrate temperature	Waiting time	
	Minimum	Maximum
+10°C	48 hours	12 days
+20°C	24 hours	7 days
+30°C	12 hours	2 days

Alternatively, if a scratch coat of Sikafloor® 24N Purcem is applied (at typical rate of 1.3 kg/m²), it shall be let cured overnight (~14 hours at 20°C) prior the body coat application.

Sikafloor® 24N Purcem -Mix and pour the Sikafloor®-24N PurCem 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 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 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 9°C or above 35°C / maximum relative humidity 80%. ■ 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 > 4%. ■ 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 LP. ■ 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®-20N PurCem). ■ 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® 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.
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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 - 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>
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Consult product label for additional information.

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. For more information, consult Sika Material Safety Data Sheet.</p>
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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>
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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>
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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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