

# Sikafloor®-31 PurCem®

## Solvent free, High Build polyurethane coating

Construction

**Description** Sikafloor®-31 PurCem® is a three part, solvent free, high build, coloured, matt finish coating based on the unique Sikafloor PurCem water dispersed polyurethane / cement aggregate technology. Typically installed as stand alone coating for concrete substrates or used as a top coat for Sikafloor-22 PurCem broadcast textured finishes. It provides an economical solution that has excellent chemical resistance properties and very good durability against abrasion and mechanical damage.

**Uses**

- In combination with Sikafloor-20 / 21 PurCem
- As a high build coating
- As a chemical resistant concrete coating
- Typically used in food processing plants, chemical storage areas, warehouses, washrooms, laboratories, food preparation areas and chemical process plants.

**Characteristics / Advantages**

- Resists a very wide range of organic and inorganic acids, alkalis, amines, salts and solvents. Consult Technical Sales for full details. Refer to the Sikafloor PurCem Chemical Resistance Chart.
- Non taint, odourless
- Excellent long term wear resistance from a two coat application
- Economical and easy to apply
- USDA acceptance for use in food plants in the USA
- Canadian Food Inspection Agency acceptance for use in food plants in Canada
- British Standards Specifications (BSS) acceptance for use in the UK

### Technical Data

**Packaging** 4.8 kg / kit

Component A: 1.3kg pail, Component B: 1.5 kg pail, Component C: 1.6 kg, Pigment 0.4 kg pack

<b>Colour</b>	<b>Standard colours:</b>	<b>*Available on request</b>
	Curtain Call	*Traffic Grey RAL 7042
	Beige RAL 1001	*Sky Blue RAL 5015
	Oxide Red RAL 3009	*Grass Green RAL 6010
	Pastel Blue RAL 5024	*Slate Grey RAL 7015
	Dusty Grey RAL 7037	
	Maize Yellow RAL 1006	

**Yield** 0.2-0.25 mm 4-5m<sup>2</sup>/l per coat

13.4-16.7 m<sup>2</sup>/unit  
(These figures do not allow for surface porosity, profile or wastage)

On broadcasted substrates (Sikafloor-21 PurCem broadcasted with sand (1.0mm) consumption is approx. 2-2.2m<sup>2</sup>L per coat.

<b>Accelerator</b>	Addition rate	0.3% by weight	0.5% by weight
	<b>Temp 21°C</b>		
	Surface dry	3 hours	90 min
	Hard Dry	6 Hours	3 hours
	<b>Temp 6°C</b>		
	Surface Dry	5 hours	3 hours
Hard Dry	8 hours	6 hours	



<b>Shelf Life</b>	Part A - 9 months Part B - 6 months Part C - 6 months Pigment - 9 months Store dry between 10°C and 25°C. Protect from freezing.																			
<b>Mix Ratio</b>	Components A:B:C:Pigment = 1:1.07:1.14:0.14 Mix full units only.																			
<b>Properties at 23°C and 50% r.h.</b>																				
<b>Application Temperature</b>	10°C min. / 30°C max. Optimal application temperature range : 20-25°C																			
<b>Density ASTM C 905</b>	1.40 kg/l																			
<b>Flow</b>	N/A (liquid)																			
<b>Cure Time</b>	<table border="1"> <tr> <td>Usable pot life</td> <td>20-25 min</td> <td>at 20°C</td> </tr> <tr> <td>Initial join up time</td> <td>5-8 min</td> <td>at 20°C</td> </tr> <tr> <td>Waiting Time Between Coats</td> <td>16 h min. / 48 h max.</td> <td>at 20°C</td> </tr> <tr> <td>Cure to foot traffic</td> <td>8-10 h</td> <td>at 20°C</td> </tr> <tr> <td>Cure to light traffic</td> <td>36-48 h</td> <td>at 20°C</td> </tr> <tr> <td>Full cure</td> <td>5 days</td> <td>at 20°C</td> </tr> </table>		Usable pot life	20-25 min	at 20°C	Initial join up time	5-8 min	at 20°C	Waiting Time Between Coats	16 h min. / 48 h max.	at 20°C	Cure to foot traffic	8-10 h	at 20°C	Cure to light traffic	36-48 h	at 20°C	Full cure	5 days	at 20°C
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<b>Softening Point</b>	130°C																			
<b>Compressive Strength ASTM C579</b>	N/A																			
<b>Tensile Strength ASTM C 307</b>	10.7 MPa																			
<b>Flexural Strength ASTM C 580</b>	24.7 MPa																			
<b>Bond Strength ASTM D 4541</b>	>1.75 MPa (substrate failure)																			
<b>Thermal Compatibility ASTM C 884</b>	Pass																			
<b>Hardness, Shore D ASTM D 2240</b>	80																			
<b>Indentation MIL-PRF-24613</b>	~ 0%																			
<b>Impact Resistance ASTM D 2794</b>	2.27 joules at 1 mm of thickness																			
<b>Abrasion Resistance ASTM D 4060</b>	-1.57 g																			
<b>H-22/1000 cycles/1000 g</b>																				
<b>Coefficient of Friction ASTM D 1894-61T</b>	Steel 0.3 Rubber 0.5																			
<b>Coefficient of Thermal Expansion ASTM D 696</b>	N/A																			
<b>Water Absorption ASTM C 413</b>	0.07%																			
<b>Chemical Resistance</b>	Consult our Technical Department																			



## Application Instructions

<b>Surface Preparation</b>	Concrete surfaces must be clean and sound. 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, i.e. steel shot blasting or any other method approved by Sika to achieve (CSP 3). The compressive strength of the concrete substrate should be at least 25MPa at 28 days and a minimum of 1.5 MPa in tension at the time of application. Repairs to cementitious substrates, filling of blowholes, levelling of irregularities, etc. should be carried out from the Sikafloor, Sikadur and Sikagard range of products.
<b>Mixing</b>	<p>Mixing will be affected by temperature; condition materials for use to 18°C to 25°C.</p> <p>Add pigment to part A. Stir for approximately 15 seconds</p> <p>Add Component B and mix for approximately 30 seconds with a low speed mixer.</p> <p>While mixing, add Component C within 15 seconds.</p> <p>Further mix for 2 minutes until the mixture is homogeneous and the pigment is uniformly dispersed.</p> <p><b>Mix full units only.</b></p>
<b>Application</b>	Apply by short or medium nap roller directly from a paint tray. Push the resin well into the surface, making sure the floor is fully wetted, and then pull back lightly with roller to the required thickness. A slip resistant texture can be attained by seeding the Sikafloor-31 PurCem with selected mineral aggregates then sealed with a second coat of Sikafloor-31 PurCem.
<b>Clean up</b>	Clean all tools and equipment with Sika Colma Cleaner. Wash soiled hands and skin thoroughly in hot soapy water or use Sika TopClean Wipes. Once hardened, product can only be removed mechanically.
<b>Limitations</b>	<ul style="list-style-type: none"> <li>• Steam cleaning may lead to delamination due to thermal shock (if used over Sikafloor-20N PurCem).</li> <li>• Do not apply below 10°C or above 30°C / maximum relative humidity 85%.</li> <li>• Do not apply to unreinforced 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.</li> <li>• Do not apply to wet or green concrete or polymer modified patches if the moisture content &gt;10%.</li> <li>• Do not apply to concrete if air or substrate temperature is within 3°C of dew point.</li> <li>• Protect substrate during application from condensation from pipes or any overhead leaks.</li> <li>• Do not mix Sikafloor PurCem materials by hand / mechanical mix only.</li> <li>• Do not apply to cracked or unsound substrates.</li> <li>• Avoid puddles during application.</li> <li>• Do not use on exterior, on-grade substrates.</li> <li>• Do not apply to surfaces where moisture vapour can condense and freeze.</li> <li>• For interior use only.</li> <li>• 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.</li> <li>• Always allow a minimum of 48 hours after product application prior to placing into service in proximity with food stuffs.</li> <li>• Products of the Sikafloor PurCem range are subject to yellowing when exposed to UV radiation. There is no significant loss of other properties when this occurs.</li> </ul>



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**Important Notes**

Component A – Frequent or prolonged skin contact may cause some local short term skin irritation. Avoid contact with eyes, may cause slight transient irritation.

Component B – Harmful by inhalation. Irritating to eyes, respiratory system and skin. May cause sensitisation by inhalation and skin contact.

Component C and Pigment – 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.

Consult Material Safety Data Sheet for additional information.

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**Health and Safety Information**

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 further information refer to our Material Safety Data Sheet.

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**Important Notification**

The information, and, in particular, the recommendations relating to the application and end-use of Sika's 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 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 proprietary rights of third parties must be observed. All orders are accepted subject of our terms and conditions of sale. Users should always refer to the most recent issue of the Australian version of the Technical Data Sheet for the product concerned, copies of which will be supplied on request.

PLEASE CONSULT OUR TECHNICAL DEPARTMENT FOR FURTHER INFORMATION.

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