Product Data Sheet
Edition 7.8.2010
Sikagard® 307 W

Industrial Flooring

Sikagard® 307 W

Single component, waterborne modified acrylic/polyurethane dispersion based surface coating with a gloss finish

Description

Sikagard 307 W is a single component waterborne polyurethane based coating, designed with specific hygiene functionality. The in film preservation is designed to remain permanently locked in and active ensuring no growth of surface micro-organisms on the Sikagard 307 W. Sikagard 307 W is available in white and 30 other standard colors.

Where to Use

- Internal walls and ceilings of environments that require continuously sanitary conditions.
- Pharmaceutical
- Food & Beverage
- Bio-tech manufacturing
- Hospitals
- Clean rooms
- Laboratories

Advantages

- Single component waterbased, low odor
- Hard finish and impact; scratch and abrasion resistant
- Gloss, easy clean finish
- Non-yellowing
- Fast development of physical strength
- Rapid drying, same day re-coat if necessary
- One coat finish (airless spray)
- Leach resistant in film preservative

Chemical Resistance

Standard 10% solutions of acids and alkalis, including Nitric Acid AND Caustic Soda, failed to cause breakdown of the Sikagard 307 W.

Typical Data

Chemical Base	Waterborne acrylic/polyurethane copolymer dispersion
VOC Content	0.22 lb/gal. or 81.7 g/l
Water Vapor Transmission	perms @ 4 mil DFT
Fire Retardancy	Excellent resistance to surface spread of flame.
Accelerated Weathering	ASTM G53-88- 5,000 hours Q.U.V. ('B' lamps) – no discoloration, chalking or crazing. Slight loss of gloss.
Tensile Elongation	(BS EN ISO 527-3-Unreinforced)

@ 24 hours - maximum stress (tensile load at break) = 6.8 N/mm² or 987 psi elongation at break = 110%
@ 48 hours - maximum stress (tensile load at break) = 7.2 N/mm² or 1045 psi elongation at break = 87%
@ 72 hours - maximum stress (tensile load at break) = 13.2 N/mm² or 1920 psi elongation at break = 50%

Adhesion	**Coarse Concrete:**	261 psi	1.8 MPa (N/mm²)
	Smooth Concrete:	754 psi	5.2 MPa (N/mm²)
	Brick:	551 psi	3.8 MPa (N/mm²)
	Cement cladding board:	174 psi	1.2 MPa (N/mm²)
	Steel:	710 psi	4.9 MPa (N/mm²)

Tensile Strength	2326 psi (16 N/mm²) (BS EN ISO 527-3 – Unreinforced)
Density	10.43 lbs per gallon (~1.26 kg/l) (DIN EN ISO 2811-1)
Hardness (Persoz)	125
Solids Content	49% by weight and 36% by volume.
Gloss	>60 gloss units at 60 degree (Classified as "gloss" to BS EN 13300:2001)
Opacity (Contrast Ratio)	>99.5% (130 micron film) (Classified as "Class 1" to BS EN 13300:2001)
Resistance to QUV	No appreciable change other than a minor reduction in gloss. (ASTM G154-04:2500 hours QUV-B)
Surface Granularity	<0.01 mm (Classified as "fine" to BS EN 13300:2001)
Abrasion Resistance	113 mg weight loss (ASTM D 4060, CS10 Wheel, 1000 g load)
Scratch Resistance	Short cure (overnight) – slight penetration at 2000 grams longer cure (7 days) – penetration at 3000 grams, surface marking evident.
Packaging	5 gallon pails
Shelf Life	24 months (when stored under the recommended conditions).
Storage Conditions	50°F (10°C) to 90°F (32°C)

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How to Use

Surface

The substrate must be sound, clean, dry and free of all contaminants such as dirt, oil, laitance, mold, grease and surface treatments. Remove loose material mechanically, or high pressure washing. All surfaces to be coated should be clean and free from dampness. Prefill any static cracks with a proprietary flexible latex/acrylic caulk. Consult Sika Technical Service.

New Drywall: Minimum level 4 finish, prime with Sika Bonding Primer thinned 10% with water. (**Note:** 307 W cannot be applied directly over Sika Bonding Primer. An intermediate coat of Sikagard 203 W is required at 6-8 mils.)

Painted Surfaces: Always ensure that the existing paint is fully adhered and sound. Abrade surface using 100 grit screen or paper. Epoxy paints, bitumen paints must be abraded using 100 grit and primed using Sika Bonding Primer, followed by a 6-8 mil coat of Sikagard 203 W. All painted surfaces that are abraded require cleaning.

CMU Block, poured in place concrete: Spalled, flaking or damaged areas should be repaired using compatible materials. Sikagard 307 W can be used as a primer when diluted with 25% water.

Sikagard 203 W can be used as a block filler on new block. Like surfaces that requires a fill/parge coat should use Sikagard EpoCem 75 (consult product data sheet). Sikagard 307 W can be applied directly to cured/sanded EpoCem 75.

Cement screeds, plaster asbestos cement, lining boards: For absorbent substrates Sikagard 307 W may be diluted with 25% of clean water as a primer to kill suction. Dusty/friable substrates, seal with Sika Bonding Primer and an immediate coat of Sikagard 205 W to stabilize.

Concrete: Ensure new concrete is at least 10 days, preferably 28 days old, with moisture content of 20% WME or less. Prime using Sikagard 307 W diluted 25% with water.

Wood: (Damp Free maximum 18% wood moisture equivalent)

Apply Sikagard 307 W directly. If wood is prone to raised grain then prime with Sikagard 307 W diluted with 25% water, when dry, lightly sand and apply Sikagard 307 W to correct film thickness.

Metals: Remove rust to bright metal. Apply Sikalastic Metal Primer WB or Sikalastic Metal Primer, use 2 coats on badly pitted or blast prepared surfaces. Non-ferrous metals can be wired brushed to remove oxidation products, prime as above. Degrease or use proprietary metal pre-treatment fluid on galvanized if greasy.

Plastics/Insulation: Most plastics can be coated directly. Use Sika Bonding Primer on self-skinning or slab-stock polyurethane/polystyrene foams. Product is not suitable for open fibrous insulation. Dusty/friable substrates require sealing with Sika Bonding Primer and an immediate coat of Sikagard 205 W to stabilize.

Overcoating Sikagard 307 W: Clean off all contamination lightly abrade with 100 grit and apply Sikagard 307 W directly.

Mixing

Pre-mix material using a drill and jiffy blade (300-450 rpm)

Application

Rollers - Product may be applied by short to medium 1/4'' - 3/8'' pile synthetic rollers. Two coats are recommended. Rollers are also used during reinforcement embedment.

Brushes - A wide soft nylon or bristle brush, Two coats are recommended, ideally product is applied with second coat at 90º to first.

Spray Equipment - Most types of industrial airless spray equipment e.g. GRACO ULTRA are suitable, pressure 3000 p.s.i. tip size .11 to .15 and 60º fan angle. Although the product is designed with built in flow, the finer tip sizes provide the smoothest finish.

Tooling & Finishing

Note: All reinforcements using Flexitape and Reemat GFM must use Sikagard 203 W as the base coat.

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Cure Mechanism

@ 50ºF/60% R.H.: Touch dry 45 mins, through cure 1 hour.

@ 68ºF/55% R.H.: Touch dry 30 mins, through cure 45 mins.

@ 86ºF/50-60% R.H.: Touch dry 15-20 mins, through cure 30-45 mins.

Application of Sikagard 307 W over Sikagard 307 W

Substrate Temp.	Minimum	Maximum
50°F (10°C)	4 hours	7 days
68°F (20°C)	1 hours	7 days
86°F (30°C)	1 hours	7 days

Application of Sikagard 307 W over Sikagard 203 W

Substrate Temp.	Minimum	Maximum
50°F (10°C)	24 hours	7 days
68°F (20°C)	4 hours	7 days
86°F (0°C)	4 hours	7 days

Coverage

400 sq.ft./gal., 4 mils WFT, recommended 2 coats

Limitations

- Do not apply near foodstuffs in unventilated conditions. Always ensure adequate ventilation.
- Do not thin or brush out like conventional paints (thinning for primer use is permissible).
- Do not apply the products below a minimum temperature of 40°F (4°C) or a maximum of 90°F (32°C) throughout the application period. Conditions must remain a minimum of 40°F (4°C) and 5°F (-15°C) above the dew point.
- Protect from frost and heat (above 90°F {32°C}).
- Product is not suitable for open fibrous insulation.
- Sikagard 307 W is normally intended to be used internally, however if used externally the natural weathering process of the material may cause slight darkening of the colors and progressive loss of gloss with time. All colors are intermixable.
- If there is any question as to whether or not the product will adhere to an existing coating or surface, a test patch should be applied and evaluated for compatibility and adhesion.
- Application by roller may result in a slight surface texture when using standard coverage rates. If a smoother finish is required apply 3 thinner coats to achieve desired DFT. Previous coat must be completely dry prior to overcoating.
- Ensure entire surface is fully dried before proceeding. Crazing may occur when overcoating undried surfaces or when material is applied in a heavy application.
- Good ventilation is required for Sikagard 307 W to dry properly.
- Gloss is effected by humidity and temperature.
- The incorrect assessment and treatment of cracks may lead to a reduced service life and reflective cracking.
- If additional heating is required, do not use gas, oil, paraffin or other fossil fuel heaters; these methods produce large quantities of carbon dioxide and water vapor, which may adversely affect the finish. Use only electric powered warm air blower systems.
- New concrete should be allowed to cure/hydrate for a minimum of 10 days and preferably 28 days.

CAUTION

WARNING: IRRITANT. Polyurethane (Mixture), Butyl Carbitol (CAS: 112-34-5) and N-methyl-2-pyrrolidone (CAS: 872-50-4). Causes eye/skin/respiratory irritation. Harmful if swallowed. **WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.**

First Aid

Eyes – Hold eyelids apart and flush thoroughly with water for 15 minutes. **Skin** – Remove contaminated clothing. Wash skin thoroughly for 15 minutes with soap and water. **Inhalation** – Remove to fresh air. **Ingestion** – Do not induce vomiting. Dilute with water. **Contact a physician. In all cases, contact a physician immediately if symptoms persist.**

Handling and Storage

Avoid direct contact. Wear personal protective equipment (chemical resistant goggles/gloves/clothing) to prevent direct contact with skin and eyes. Use only in well ventilated areas. Open doors and windows during use. Use a properly fitted NIOSH respirator if ventilation is poor. Wash thoroughly with soap and water after use. Remove contaminated clothing and launder before reuse.

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Clean Up	Clean brushes and spray equipment with water. Dried Sikagard 307 W can be removed with paint stripper, cellulose thinners, xylene or toluene. Use personal protective equipment (chemical resistant gloves/ goggles/clothing). Without direct contact, sweep up spilled or excess product and place in suitable sealed container. Dispose of excess product and container in accordance with applicable local, state, and federal regulations.
Additional Info	Technical Data Sheets are updated periodically. To ensure the most current version is being used, visit Technical Resources on www.sikafloorusa.com. Proper material application is the responsibility of the user. Site visits made by Sika personnel are for making technical recommendations only and not for supervising or providing quality control.

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