

SX5 WORXGUARD

SELF-LEVELLING, SOLVENT-FREE EPOXY
INDUSTRIAL COATINGS



Description

A two-component, solvent-free epoxy paint for medium to high traffic purposes.

Recommended For

Designed to protect concrete substrates in areas exposed to medium and high traffic such as laboratories, car parks, warehouses and factories. It is ideal where a seamless flooring surface combined with excellent mechanical properties is essential.

Key Features

- Solvent-free - Odor-free
- High-build - Self-leveling
- Excellent chemical, abrasion and impact resistance

Physical Properties

Solvent Type	Solvent free
Finish Type	Gloss based on ASTM D523
Spreading Rate	1 - 1.3 sq. / Kg / coat at 500 Microns roll applied 0.5 - 0.65 sq. / Kg / coat at 1000 microns cast applied 0.30 - 0.35 sq. / Kg / coat at 2000 microns cast applied
Dry Film Thickness	By Troweling- up to 2000 microns -. By Roller-from 500 microns
Pot Life	80 min at 25 ⁰ C
Recoat	After 24 hours
Full Cure	7 days after application
Density	~ 1.5 g/L based on ASTM D4541
Adhesion	> 4N/mm ² (concrete fracture) based on ASTM D 4541
Compressive Strength	Method: ISO 604 Result: 65 N/mm ² Conditions: 10 days @ 20°C
Elastic Modular Tension	Result: 9200 N/mm ² Conditions: 10 days @ 20°C
Flexural Strength	Method: ISO 178 Result: 24 N/mm ² Conditions: 10 days @ 20°C
Coefficient of Linear Thermal Expansion	Method: DIN 53752 Result: 49 x 10 ⁻⁵ /K Conditions: 10 days @ 20°C
VOC	< 100 g/l as Per EPA Method 24
Bases	White, W1, N
Colors	Tintable in 1100 color A minimal amount of colorant should be added for tinting solvent free epoxies. Added too much colorant will adversely affect curing.

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Surface Preparation

Recommended surface preparation should follow the guidelines of the International Concrete Repair Institute (ICRI). Key to the guidelines is ICRI's Concrete Surface Profile (CSP) classifications, a system of ten distinct textures ranging from CSP1 (nearly flat) to CSP10 (extremely rough).

Most common conditions on site:

Laitance

Laitance is the weak, milky layer of cement and sand that rise to the concrete surface as a result of premature finish or troweling. If a coating is applied directly to the laitance layer, the floor traffic will cause disbanding of the coat.

Contaminations

Old concrete floors can be contaminated by oil, grease, chemicals etc. Check the surface for dark patches that indicate contamination. Spray water on it to see if it absorbs the water. If water stays on the surface, then it indicates contamination, and must be removed by concrete cleaner or degreaser.

Porous concrete

The common procedure is to sand and apply a primer that penetrates the substrate well. In cases where a high performance is needed, it is possible to shot-blast or scarify.

Polished concrete and non-porous construction materials

It is essential to apply proper primers. For high-performance systems such as those applied in hygienic areas, shot blasting, scarifying or grinding is necessary.

Well-attached old paint

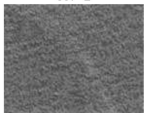
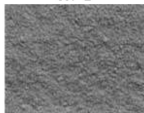
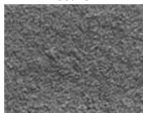
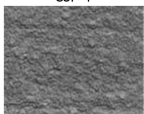
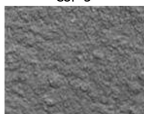
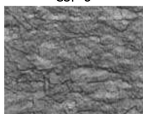
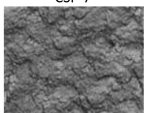
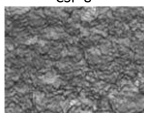
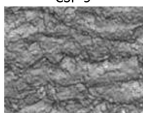
Should be sanded in order to ensure good adhesion.

Badly-attached old paint

Remains of badly-attached, old materials must be removed as these can cause detachment.

Damp

Surfaces that have problems with dampness require a system that permit vapor permeability. If they don't comply with these requirements, there will be an increased risk that the flooring will blister or detach.

CONCRETE SURFACE PROFILE (CSP) CLASSIFICATIONS & RECOMMENDATIONS				
 CSP-1 Acid Etched	 CSP-2 Grinding	 CSP-3 Light Abrasive Blast	<p>The CSP chart is used as a visual representation of desired concrete surface textures, roughness and general appearance. The guideline designates each CSP classification as a suitable base for specific coating types and thicknesses.</p> <p>It also describes the method(s) or equipment typically used to achieve the texture according to the CSP classification.</p>	
 CSP-4 Medium Blast	 CSP-5 Medium/Heavy Blast	 CSP-6 Heavy Blast		
 CSP-7 Heavy Shotblast	 CSP-8 Extreme Shotblast	 CSP-9 Extreme Shotblast		
0 to 75 microns				CSP1
100 to 300 microns				CSP2 – CSP3
1000 to 3000 microns				CSP3 – CSP4
Above 3000 microns				CSP3 – CSP4 – CSP5

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CSP1 PROFILE	CSP2 PROFILE	CSP3-CSP7 PROFILES
Acid etching	Grinding	Shot Blasting
Diluted hydrochloric acid is applied liberally onto the floor by a watering can or an acid-proof manual spray pump. This method does not remove surface contaminates such as oil and grease, which must be removed before the etching process.	A diamond grinder uses horizontally-rotating discs to level, smooth and clean the concrete slab surface. This method carries a low surface damage risk.	A dust-free technique that removes, cleans and achieves the desired profile of the surface in a single step. Thousands of steel shot particles are propelled onto the surface, removing the top layer and contaminates on the concrete surface

Application Conditions

Application can only proceed at temperatures above 10°C, and relative humidity below 75%. Drying data are given on the assumption that proper ventilation is provided. At higher temperatures epoxy will cure faster than normal. SX5 WorkxGuard should not be applied to concrete where direct sunlight is present. Increase in floor temperature during the application may result in bubble formation at the surface during curing. SX5 WorkxGuard should not be applied to concrete with more than 4% moisture or in areas of high carbonation to prevent the development of carbamate and water spots on the surface

Application Method

Tools / Equipment

- V-Notch Toothed Trowel (4 mm or more)
- Rake Trowels
- Bull Float with spikes for adjusting thickness
- Bull Float Squeegee
- Mohair Short Nap Paint Roller
- Metal Spike Roller
- Spiked Boots for using while applying
- Slow mixing drill

Primer / Filler	Tools Needed	Thinner	Notes
SX 2 if needed SX0 3 to 4 coats	Epoxy Roller Spiked Roller	None	All areas should be divided accordingly to the intended consumption / thickness

Priming

- Mix the SX0 PrimeWell resin component before adding the hardener.
- Add the hardener component into the resin and mix at slow speed for a few minutes.
- Mixing at slow speed reduces the chances of bubble formation in the epoxy.
- Only mix the amount of epoxy that can be used within the specific pot life.
- Stir well both components and with a brush or an epoxy roller

Finish

- Apply SX5 WorxGuard once the primer coat has dried (24 hours).
- Mix the SX5 WorxGuard resin component well before adding the hardener into the resin. Once the hardener added, mix both components thoroughly at slow speed using a slow rotation mixer for approximately 4-5 minutes. The mixture will look very homogeneous signaling the end of mixing.
- Homogeneity can be tested by swiping the surface of the epoxy mixture using a stirring rod. If the surface levels easily and readily, the mixture is ready for application. If not, then the sample should be mixed further.
- SX5 WorxGuard can be applied by casting or by roller. When applying by roller, It is important to use a shorthaired mohair roller in order to get the best suitable surface by painting, without defects. This also accounts for better coverage by painting. When casting, pour the self-leveling SX5 WorxGuard directly on the primed and clean surface. If a 1mm thickness is desired use a 4 mm V-Notch trowel. For 2 mm thickness, use a 6 mm V-Notch trowel. Immediately after, pass over the poured surface with the spike roller to break-up possible air bubbles formations.
- Depending on the surface desired, SX5 WorxGuard can be applied with or without the addition of special quartz into the epoxy (broadcasted over the casted surface).

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Pack Size

	White	W1	N	Hardener
1 US Drum (kg)	16.1	15.9	15.7	3.58

Shelf Life

24 months from the date of production.

Storage and Handling

Care should be taken to avoid spillage. Product should be stored in a dry area and protected from freezing. Extreme temperatures may cause paint to become unusable. For example: freezing and thawing may cause paint to gel, and high heat may cause solid skin to form.

Safety

Use under well ventilated conditions. Do not breathe or inhale spray mist or sanding dust. Avoid skin contact; spillage on the skin should immediately be removed with suitable cleanser, soap and water. In case of eye contact, flush immediately with water for at least 15 minutes and seek medical attention immediately. If you experience difficulty breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical attention immediately.

Cleaning

Remove as much leftover product as possible from the application equipment before cleaning. Clean equipment immediately after use with mineral spirits or paint thinner. Do not empty product into drains or watercourses. Wash hands after use in warm soapy water.

Technical Assistance

Available through your local COLORTEK® Design Center or through your COLORTEK PAINTS® authorized distributor. For the location of the retailer nearest you, email us at info@colortek.eu or check our website www.colortek.eu.

Disclaimer

Product batches are subject to stringent quality control checks in conformity with ISO 9001:2008, Certificate CH12/1128. The information submitted in this manual is correct to the best of our knowledge & experience. No liability whatsoever can be accepted on the basis of the information supplied herein.