SX1 TOUGHGUARD

SOLVENT-BASED, 2 PACK MULTI PURPOSE EPOXY

INDUSTRIAL COATINGS

Description

A two-component, general purpose, solvent-based epoxy for pedestrian traffic and industrial maintenance painting works.

Recommended For

Designed to protect floors and walls in residential and public areas exposed to pedestrian traffic such as malls, offices, hotels, restaurants, villas and small building garages. It is ideal for light duty floors where it protects the floor from mild spillages, abrasion and other mild impacts.

Key Features

- Good abrasion resistance
- Good chemical resistance
- Optimum protection
- Resin rich

Physical Properties

Solvent Type	Solvent based
Finish Type	Available in Flat and Gloss based on ASTM D523
Dry Film Thickness	Starting from 75 microns depending on system
Spreading Rate	6.5 - 7 sq./ Kg / coat depending on surface conditions and application technique
Thinner	Epoxy thinner: 30% for roller and brush application - 50% for spray application
Pot life	2 hours
Recoat	After 24 hours
Full cure	3 days
Flash Point	Base 27°C, Hardener 27°C
Adhesion	> 4 MPa based on ASTM D 4541 (concrete failure)
Scrub Resistance	Greater than 10,000 cycles based on ASTM D2486
Density	Approx. 1.25g/cm^3
Solids	Approx. 52% by volume
Viscosity	1,000 – 3,000 cP (Spindle 3/ Speed 10)
Bases	White, W1, N, 1/10, Flat N, Black Gloss, Black Flat, Grey RAL 7012
Colors	1100 colors
VOC	< 250 g/l as Per EPA Method 24

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.

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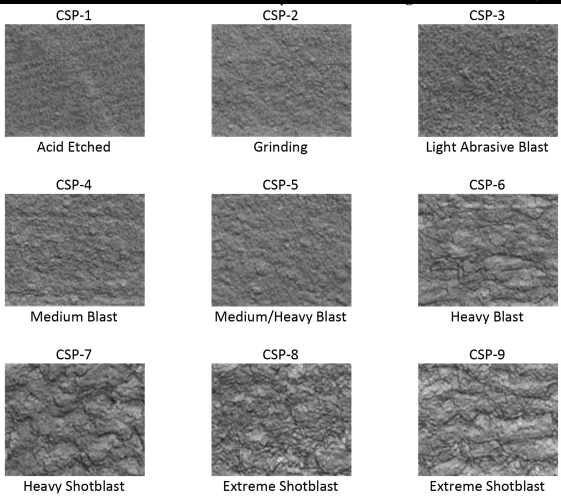
Porous concrete
The common procedure is to sand and apply a primer that penetrates the substrate well. In cases where a high performance is needed, it is possible to shot-blast or scarify.

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. For a coating to bond properly, the concrete surface must be sound, clean and free from surface defects and dryness. The surface should be properly roughened to establish a good mechanical bond.

CONCRETE SURFACE PROFILE (CSP) CLASSIFICATIONS & RECOMMENDATIONS	
	**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.** **It also describes the method(s) or equipment typically used to achieve the texture according to the CSP classification.**
0 to 75 microns	CSP1
100 to 3OO microns	CSP2 – CSP3
1000 to 3000 microns	CSP3 – CSP4
Above 3000 microns	CSP3 – CSP4 – CSP5

	CSP1 PROFILE	CSP2 PROFILE	CSP3-CSP7 PROFILES
Method	Acid etching	Grinding	Shot Blasting
Notes	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 slap 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. This method carries a low surface damage risk.

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.

SX1 ToughGuard 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.

SX1 ToughGuard 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.

Priming Systems

Primer / Filler	Tools Needed	Thinner	Notes
- **SX2 FillWell if needed** - **SX0 PrimeWell 2 to 4 coats depending on surface conditions**	Epoxy Roller Spiked Roller if needed	Epoxy Thinner	All areas should be divided accordingly to the intended consumption / thickness

Application Method

Tools

- Mohair Short Nap Paint Roller
- Slow mixing drill

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 apply.
- Apply SX0 PrimeWell with a brush or an epoxy roller.

Finish

- Apply SX1 ToughGuard once the primer coat has dried (after 3 hours before 24 hours).
- Mix the SX1 ToughGuard 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.
- SX1 ToughGuard can be applied in 1 or 2 coats onto various smooth substrates. This is done by using a Mohair roller. It is important to use a shorthaired roller in order to get the best suitable surface by painting, without defects. This also accounts for better coverage by painting.
- 3 coats might be needed for complete obliteration in darker colors

Notes

Depending on the surface desired, SX1 ToughGuard can be applied with or without the addition of special quartz into the epoxy (broadcasted over the casted surface).

Pack Size

	PW	W1	W3	Clear N	1/10	Flat N	Grey RAL 7012	Black Gloss	Black Flat	Hardener
1 US Quart (kg)	1.05	0.87	1.0	0.75		0.75	1.05	0.875		0.12
1 US Gallon (kg)	4.2	3.5	4.0	3.1	4.0	3.1	4.2	3.5	3.5	0.48
1 US Drum (kg)	21	17.5		15.5	20	15.5	21	17	16	2.4

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.

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