

Data Sheet

Sentry Concrete Shield



Description

Sentry Concrete Shield is a coating for protecting concrete and masonry surfaces from the destructive forces of water, chloride ion penetration, food and beverage acids, bird and animal waste matter, salt spray, gum, and graffiti.

Concrete Shield is peel and flake resistant. Available in a gloss, satin or matte finish. Can be applied over Sentry Quick Seal & Enhancer.

Characteristics

- **Color:** Clear to slight Amber to Rose (depending on temp and humidity) always dries clear
- **Finish:** Gloss or Satin
- **Vehicle Type:** Solvent Base
- Flash Point: C Pensky–Martens closed Cup -9°C/15°F
- **VOC:** less than 100 g/L
- **Weight per Gallon:** 7.36 lb.
- Non-breathable

Surface

- Concrete Walls & Structures
- Floors
- Masonry Pavers
- Bricks
- Cement Block

Testing

- ASTM D-3363 Film Hardness Taper, 39.11 average
- ASTM D-2047 Static Coefficient passes ADA requirements*
- E96-10 Water Vapor Transmission, average WVT 0.8053 gr/ft²/hr., average perms 1.9406 gr/ft²/hr.
- G155 Xenon Arc, wavelength 340nm irradiance 1.0 w/m² 500 hours, slight change

Solution

- Moisture
- Most Stains
- Mild Acids
- Bird & Animal Waste

*Always obtain independent retest of the static coefficient after applying any coating on walking

surface to verify new application meets OSHA requirements

Spread Rate

Recommended Spread Rate per coat:

- Wet mils: 2.5-3.5
- Dry mils: 1.5-2.1

Coverage

Coverage: 400-600 sq. ft./gal (approximate) Coverage will vary depending on the porosity and texture of the substrate, as well as the applicator's method of application.

Use **Sentry Quick Seal & Enhancer** to pre-seal porous unpainted surfaces first. Over unglazed ceramic or porcelain tile apply **Quick Seal & Enhancer** then apply **Concrete Shield**.

Surface Preparation

Surface must be clean, dry, and in sound condition. Remove all oil, dust, grease, dirt, and other foreign material. Any existing floor that has retained oil must be completely free from any further wicking action, as this will prevent a bond and the coating will delaminate.

IMPORTANT: REMOVE ANY SILICON

Sentry Concrete Shield will not adhere to silicones or polymer-modified grouts. To determine if the surface is previously sealed or coated, sprinkle water onto the surface.

If the water is absorbed and the surface becomes darker, it has not been sealed. If the water beads up, there is a coating or sealer that must be removed to allow adhesion of Sentry Concrete Shield to the substrate. To remove silicon sealers, use **Sentry Step #1 Cleaner for Unpainted Surfaces**. Rinse with fresh water and allow to dry. Moisture content not to exceed 13% before applying is required.

Pre-sealing Required on Unsealed/Porous Concrete

On unsealed or porous concrete, you need to apply a sealer first, such as *Sentry Quick Seal & Enhancer*, to

prevent the concrete surface from absorbing too much of the Concrete Shield, rendering it ineffective. If enhancement is not desired, use any good water-based sealer that does not contain silicone.

New Concrete or Masonry Surface

If in sound condition, clean the surface of all foreign material, including dirt, dust, grease, oil, loose particles, laitance, coatings, and curing or release agents. Use **Sentry Step #1 Cleaner for Unpainted Surfaces**. Rinse with fresh water and allow to dry. Moisture content should not exceed 13%. Smooth surfaces should be abraded to 220 grit by sand or bead blasting or grinding with a floor machine. Test the surface for the proper pH balance of between 7 and 9.

Previously Painted Surfaces

If in sound condition, clean the surface of all foreign material. Use **Sentry Step #1 Cleaner for Painted Surfaces**. Rinse with fresh water and allow to dry. If the paint is peeling or badly weathered, reapplication of the existing paint may be necessary.

If re-paint is required proceed with that process outlined by the paint manufacturer, then apply Sentry Concrete Shield, following the paint manufacturer's re-application time table. If repaint is not necessary, the old paint will require mechanical abrading to 220 grit before applying the Sentry Concrete Shield.

Application Instruction Test Area

Due to the wide variety of texture and porosity of concrete and masonry surfaces and the various methods of application and environments, test Sentry Concrete Shield in an inconspicuous location to ensure adhesion and determine that the desired look is achieved. There will be a slight enhancement or change in appearance from the natural surface, along with a shine, either gloss or satin, depending which finish is chosen.

Application

Sentry Concrete Shield can be applied with an acetone/alcohol proof pump sprayer with a grey or red fan tip or rolled on using a high-density ultra-smooth roller. With either method of application, always mask off any adjacent surfaces to keep them free of drips or accidental coating.

Always provide positive fresh air and exhaust when applying indoors and make certain there is no possible

ignition source, such as a pilot light. When applying outdoors, make certain the ambient temperature is between 45°F and 105°F, 90% RH or less and that there is no chance of rain for a minimum of 5 hours after the estimated time of completion of the coating process. Also make certain there will be no additional morning dew to make the surface damp again before it has dried.

Pump Sprayer

Stir the contents thoroughly in the container to suspend the Nano particles that have settled to the bottom before pouring into sprayer. Typically, about ¼" of buildup will be present in the bottom of the can. All this needs to be suspended for the coating to perform.

Make certain to re-shake in the pump sprayer every 15-20 minutes to suspend the settling Nano particles to ensure proper performance. Using an SP brand acetone/alcohol proof pump sprayer or equivalent, install red fan tip on the wand, as this provides the most even application. The SP sprayer is equipped with a valve stem like on a car tire. It is recommended to keep an even amount of pressure while spraying to keep a consistent look.

We recommend hooking up a compressor and air hose with a quick release to the valve stem on the SP Sprayer and then supply the SP Sprayer with a constant 35 PSI. This will provide an even flow and finish. To start spraying, hold the tip square to the surface being coated at a distance of 10" to 12" off the floor.

In a separate container, begin spraying into the container to avoid initial spitting of product on the floor caused from air trapped in the spray wand. When you stop spraying, also stop the flow in the separate container, as spray wands often drip a few drops after handle is released. You want to provide even distribution of the coating, so a smooth right to left then up and down pattern at a fairly fast rate should provide good coverage.

This product should go on thin and never allow ponding. It is always best to spray on a few mock ups to get the feel of putting down this product before attempting an actual project. Be careful not to apply too thick or allow the product to pond as this will cause too much surface tension and possible bubbles or delimitation.

Do not apply a second coat unless there is a flaw in your application of the first coat. If a second coat is necessary, wait 24 hours for the surface to dry. Then abrade the surface with 220 grit sandpaper on a buffing

floor machine to allow the second coat to bond. Clean floor of dust and reapply.

Roller

Stir contents thoroughly in the container to suspend the Nano particles that have settled to the bottom. Typically, there will be approximately ¼" of buildup in the bottom of the can that you need to suspend for the coating to perform. Make certain to re-stir every 15-20 minutes to suspend the Nano particles.

This will ensure proper performance. Using a high-density ultra-smooth roller roll onto surface in a cross-pattern; left to right, then up and down, always keeping a wet edge. Make certain the roller is completely saturated always. Do not apply a second coat unless there is a flaw in your application of the first coat.

If a second coat is necessary, wait 24 hours for the surface to dry. Then abrade the surface with 220 grit sandpaper on a buffing floor machine to allow the second coat to bond. (Second coat will not adhere to first coat unless the surface is abraded by sanding) Clean floor of dust and reapply.

Dry Time

Drying Time (@ 77°F, 50% RH):

Drying time is Temperature, humidity and film thickness dependent. (The higher the humidity, the faster the dry time)

- Touch: 2-3 hours
- Through: 3-5 hours
- Walk on: 8 to 12 hours
- Full Cure: 7 Days

Interruption of Work

It is advisable to stop application on an expansion joint or any other obvious marker, so the applicator can begin where the application had previously ceased.

If an area becomes damaged, re-abrade the area using 220 grit sandpaper on a floor machine and re-apply over the area. Prevent any traffic on the area for a minimum of 5 hours. Keep moisture from repaired area and allow curing for 7 full days.

Clean Up

Clean tools and flush equipment with acetone thoroughly before product dries. Once product is dry, solvents will not clean the product off.

Caution: Always wear OSHA approved 1910.134 and ANSI Z88 2 respiratory protection.

Fresh air and exhaust should be provided in the work area. If inhaled, remove affected person to fresh air. Call physician immediately if physical difficulties occur. Wear butyl rubber gloves and other skin protection to avoid contact. In the event of contact with skin, wash skin thoroughly with soap and water.

Chemical safety goggles or splash shields are required. Do not wear contacts without eye protection. If you get coating in your eyes, rinse with fresh water for 15 minutes and seek immediate medical attention. If accidentally swallowed, rinse mouth with fresh water for 15 minutes and seek immediate medical attention. In enclosed areas, make sure to have an observer watching the applicator for any signs of physical distress.

Care & Maintenance

Clean with a mop using **Sentry Step #3 Safe Clean** then rinse with water. On large commercial type floors, a floor machine can be driven over the surface in wash mode only with the **Sentry Step #3 Safe Clean** as the cleaning agent.

A soft, non-abrasive pad may be used to buff the floor for a shiny finish. Wax coating is no longer necessary. If an area becomes damaged, abrade the area using 220 grit sandpaper on a floor machine and re-apply over the area. Prevent any traffic on the area for a minimum of 8 hours. Keep moisture from repaired area and allow curing for 7 full days.

Warranty: Limited 10 Year

Sentry Molecular Coatings Inc. guarantees Sentry Concrete Shield to be defect free from date of purchase for 10 years and any material that is proven to be defective will be replaced in a like quantity by the manufacturer with proof of purchase receipt and provided it has been applied according to the instructions on container and data sheet along with other related guidelines posted at

SentryMolecularCoatings.com.

This warranty only extends to the owner of the property upon which the product is applied and is non-transferable. Seller will replace product 100% of full value for the first 3 years then prorated for the remaining 7 years. Warranty does not cover wear and tear only manufactures defects. Any warranty claim must be made in writing and sent to seller with supporting materials and access to the property for inspection and testing as requested by seller.

Seller will thereafter provide replacement product for product found to be defective. This warranty is given in lieu of all other warranties, express or implied, including any warranty of merchantability or fitness for a particular purpose. The remedy stated herein is an exclusive remedy and seller shall not be responsible for any other damages, including labor or any incidental, consequential, special or punitive damages, whether based on breach of express or implied warranty, negligence, strict liability or other legal theory.



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