



# 100 XR

## Technical Data Sheet

**Product description**

: 100% solids two-component (2A:1B) epoxy floor coating system which is virtually VOC-free. This product possesses superior mechanical properties best suited for industrial, commercial and residential applications. It offers a long pot life and working time. This has been designed as a topcoat epoxy but is also a self-priming base coat. The formulation is based on a high-performance cycloaliphatic polyamine technology displaying outstanding properties and superior aesthetic finish.

This Epoxy provides adhesion while providing excellent physical and chemical resistance. This coating meets LEED standards. Provides excellent resistance to abrasion and chemical resistance. This meets a variety of requirements such as durability, performance as well as aesthetics. This seamless coating offers an unlimited choice of color, and a smooth or nonslip finish can be achieved using a very fine to very aggressive aggregates. This system has been approved by the USDA Food Inspection Agency for surfaces. It meets LEED standards. CCTR also meets FDA and USDA as an antimicrobial surface. The key characteristics for any food-safe surface are that it must be smooth, non-porous, and durable to prevent bacterial growth and allow for effective cleaning and sanitization.

**Advantages**

- + Environment friendly (100% solids, VOC-free and no solvent)
- + Potential for LEED eligibility
- + Virtually odor free
- + Easy application with long pot life and working time (60 minutes)
- + Can be used for metallic epoxy systems
- + Superior mechanical and chemical properties suited for the toughest industrial applications
- + Good elongation and excellent abrasion resistance
- + High resistance to amine blush and contamination (fish eyes)
- + Impermeability / low moisture sensitivity
- + High density of the product prevents dirt penetration resulting in low maintenance post application
- + Available in unlimited color range

**Uses**

- : Industrial, commercial and residential uses
- Manufacturing facilities
- Warehouses
- Commercial centers
- Office buildings
- Retail stores
- Metallic systems
- Parking garages
- Food/beverage processing and preparation plants
- Public facilities including hospitals and schools
- Pharmaceutical companies

Technical Properties		
Shore D Hardness	ASTM D2240	80
Abrasion (1000 cycles)	ASTM D4060	78mg loss
Pull-Off Test		>3mps
Elongation	ASTM D412	9%
Tensile Strength	ASTM D412	7700 psi
Viscosity		900-1000 cps
Solids Content		100%

Cure Time	
Working Time	60 minutes @ 72°F and 30% relative humidity
Tack Free	9hours @ 72°F and 30% relative humidity
Recoat Time	10-24 hours @ 72°F and 30% relative humidity
Dry Through	13 hours @ 72°F and 30% relative humidity
Light Foot Traffic	24 hours @ 72°F and 30% relative humidity
Light Traffic	48 hours @ 72°F and 30% relative humidity

Application Data	
Mix Ratio	2A:1B
Packaging	3 US gallon kit (3x3.78L) 15 US gallon kit (3x18.9L)
Color	Clear or colored
Solids Coverage/ US Gal	Mils 8 : 200 sq ft Mils 10 : 160 sq ft Mils 12 : 133 sq ft Mils 30 : 54 sq ft Mils 40 : 40 sq ft Mils 50 : 32 sq ft
Shelf Life	One year; in original unopened factory pails under normal storage conditions
Substrate Temp	Min 16° C/61° F, Max 30° F/86° F

**Surface Preparation:** Concrete should be clean, dry and free of grease, oil, paint, curing agents or any contaminants that may inhibit proper adhesion. Concrete should be cured at least 28 days before applying the coating system. If the concrete slab has been installed within 28 days, A moisture mitigation system can be considered. Proper testing procedures should be practiced with regards to soil acidity and moisture vapor transmission. Take a pH reading to ensure concrete is neutral (a reading between 5 and 9 is acceptable). Use a calcium chloride test to measure moisture vapor transmission. Readings of 3.5 lbs/1000 sq. d. during a 24-hour period or less are acceptable for applying coating. Floors with higher results can receive a moisture mitigation system. Surface must be shot blasted or prepared with an equivalent mechanical means in line with CSP-2 or more. Ensure the surface is free of contaminants, and the pores are open to allow the product to penetrate. If the product is applied over an existing epoxy flooring system that has been cured for a period longer than 24 hours, it should be sanded with a proper floor machine. A mechanical bound to a sanded surface is required and the pores of the existing coating must be opened for better adhesion. Vacuum dust and properly wipe the surface with alcohol prior to applying. Conduct adhesion tests if there is a doubt about surface preparation. When using a broadcast decorative system, the base coat with the flakes should be scraped and cleaned after appropriate hardness is reached prior applying the topcoat. Contact us for more details on how to use the product with broadcast systems.

**Mixing:** Before final mixing, pre-mix part A at low speed. Special attention must be paid to colored versions of the product since pigments may have separated from the rest of the formulation during storage. Mixing should be done until the color is uniform. If a metallic pigment system is being considered, it is imperative to read the METALLIC PIGMENTS data sheet for mixing times as well as advice. Then, mix two parts of A and one part of B together at low speed in a separate container. The mixing container must be clean and free of any outside particles. Mix thoroughly for a minimum of three minutes, until a completely homogeneous mixture is obtained. Use a low-speed drill (300-450 rpm) to minimize the entrapment of air. It is recommended to activate the mixer in the reverse mode after the first 90 seconds for the liquid to mix from the bottom of the mixing can to the top. Make sure to scrape sides and bottom of mixing container so no unmixed material remains.

**Application:** Apply only when air and slab temperature is between 16°C / 61°F -30°C / 86°F and the relative humidity of less than 85%. If a heated floor is installed, ensure that the system is turned off during application and for the full duration of the cure. The product has been designed to adhere to concrete surfaces. This is self-priming. When used as a basecoat, apply with a squeegee in thin coats without back rolling to seal properly the surface, this will help reduce the creation of pin holes. For the second coat, repeat the same steps and back roll the product. It is recommended to apply the product in a multidirectional (north- south, east-west) motion to ensure proper coating thickness. If there is a significant presence of pinholes after applying the first coat due to the porosity of the concrete, sand and plug the pinholes with epoxy gel. We recommend the application of one base coat and one topcoat for total system thickness of approximately 20 mils for standard systems. For metallic systems, we recommend a thickness level between 30 and 50 mils for the metallic topcoat. The METALLIC PIGMENTS system requires specific installation steps (Refer to the METALLIC PIGMENTS technical data sheet or contact us for additional details).

**Limitations** Requires a dry substrate. Moisture content of the substrate must be below 4% before applying the product. This product should not be applied to concrete substrates that show high levels of moisture/humidity unless a moisture mitigation system is used. Although this product may be applied in a wide range of thickness, limitations may apply when taking into consideration curing time. Everything else being equal, thicker is the film, quicker is the curing time. Drying time will be faster in a hot environment. Conversely, the drying time will be longer in a cold environment and the appearance of the surface may be affected. Do not clean the finished surface during the week following installation. Keep the product stored at room temperature to ensure consistent results.

