



PRODUCT DESCRIPTION

CHEMPROOF™ SC is 2:1, 100% solids, 0 VOC, two-component epoxy resin-based primer based on phenolic amine chemistry specifically designed as a moisture barrier for concrete floors with very high residual moisture prior to laying floor coverings, coatings, or parquet. (Up to 15 lbs/1,000ft²/24 hr.).

CHEMPROOF™ SC is Also suitable on calcium sulphate-based screeds with slightly higher residual moisture.

As a primer for absorbent, non-absorbent as well as smooth surfaces. For interior and exterior use.

Concrete slabs at ground level emit invisible moisture vapor. The permissible moisture emissions for concrete are 3 lb./1000ft² over 24 hours (<4%) based on calcium chloride test. In addition, a relative humidity (RH) test can be performed to test for moisture vapor. Relative humidity test results should be less than 85% per ASTM F2170. If humidity is above this level, blistering and delamination of the coating may occur. A calcium chloride or relative humidity test should be performed to determine the moisture levels of the concrete. If humidity levels exceed 85% for RH test or 3 lbs. for calcium chloride, the **CHEMPROOF™ SC** concrete moisture vapor control system is designed to be used before applying the coating system.

ADVANTAGES

- ☑ Made from 100% solids.
- ☑ Resistant to chemical loadings
- ☑ Good penetration
- ☑ Can be applied to almost all substrates
- ☑ Grip promoting
- ☑ Suitable for application on subfloor heating systems
- ☑ Resistant to bacteria and moisture
- ☑ Exceeds ASTM F3010 standards
- ☑ 0 VOC
- ☑ Extended Working Time
- ☑ High sealing function
- ☑ For increased residual moisture and single-layer application
- ☑ Magnesite screeds
- ☑ Old sealed/coated surfaces
- ☑ Impermeable and seamless.
- ☑ Up to 15 lbs/1,000ft²/24 hr.

TYPICAL USAGE

Where the concrete moisture content exceeds >4% or, 3 lb./1000ft² over 24 hours.

TESTING

All surfaces are not the same. It is recommended that a sample area be done before the start of the project.

A sample area should also be done on any existing coatings and/or substrate to determine if any contaminants exist or if delaminating will occur.

CHARACTERISTICS

As a primer on substrates with high moisture residual

- Up to 10 wt.-% on concrete
- Up to 6 wt.-% on heated concrete (kiln drying testing necessary)
- Up to 5 CM-% on unheated cement screed
- Up to 3 CM-% on cement screed with floor heating
- Up to 0,8 CM-% on unheated calcium sulphate screeds
- Up to 0,5 CM-% on calcium sulphate screeds with floor heating

As a primer to improve adhesion on smooth and sound substrates

As a protective membrane against moisture out of auxiliary products by substrates sensitive to moisture

Vapor Permeance @ 20mils thickness ≤ 0.1% perm.

ASTM E96

MVER/RH @ 20 mil thickness up to 15psi.

ASTM F1869

PACKAGING

The **CHEMPROOF™ SC** kit consists of Resin Part A and Part B Hardener.

	Part A	Part B
3 Gallon Kit	7.56 Liters	3.78 Liters
15 Gallon Kit	37.84 Liters	18.92 Liters
55 Gallon Kit	207.90 Liters	103.95 Liters
165 Gallon Kit	415.80 Liters	207.90 Liters
Totes	1,000 Liters	500.00 Liters



PHYSICAL PROPERTIES

Volumetric Ratio:	2A:1B
Solids Content:	100%
*Coverage:	80 ft ² /Gallon – 240 ft. Kit
Application Temperature:	32-90°F (0-32°C)
Min Substrate Temperature:	32°F (0°C)
Max Substrate Temperature:	86°F (30°C)
Thinner:	Not required
**Drying / Curing Time :	
Pot Life @ 21°C (70°F):	5 minutes @ 21°C (70°F)
Working Time:	25 minutes
Gel Time:	10-15 Minutes
Tack Free:	4-5 hours (Shore D 70) @ 21°C (70°F)
Pedestrian:	24 hours @ 21°C (70°F)
Traffic:	48 hours @ 21°C (70°F)
Maximum Recoat Time: @ 21°C for resurfacing	6-8 hours @ 21°C (70°F)
Maximum Working Temperature:	32°C (89.6°F)
Minimum Working Temperature:	10°C (50°F)
Maximum Substrate Temperature:	30°C (86°F)
Minimum Substrate Temperature:	8°C (46.4°F)
Viscosity (Part A) @ 70°F / 21°C:	2,700 - +3,300 cP
Viscosity (Part B) @ 70°F / 21°C:	250 - 300 cP
Density (Part A) @ 70°F / 21°C:	*1.15-1.34 g/m ³ *Variable according to color
Density (Part B) @ 70°F / 21°C:	1.1 g/m ³
Shelf Life:	18 months
USDA Food & Beverage & CFIA:	Meets the requirements
LEED V4.	Compliant

*Approximate coverage. May vary based on substrate porosity, thickness, and application methods.

**Drying and curing time will vary based on ambient temperature, humidity levels and substrate temperature. Adjust accordingly or contact your CHEMTEC™ technical representative for further assistance.

TECHNICAL PROPERTIES

Property	Value	Reference
Compressive Strength:	11,000 psi	ASTM C695
Flexural Strength:	13,900 psi	ASTM D790
Tensile Strength:	9,000 psi	ASTM D638
Bond to concrete:	450 psi	ASTM D4541
Concrete fails at this point		
Taber Abrasion:	75-80 Mgs	ASTM D4060
Flammability	Self-Extinguishing	ASTM D635
Hardness, Shore D	35-40	ASTM D2240
(After 4 Hours @ 17-20°C / 62.6-68°F 55-88Rh intervals).		
Flash Point:	>200°F (93°C)	ASTM D93

SUITABLE SUBSTRATES

- ✓ Concrete
- ✓ Cement and rapid cement screeds
- ✓ Calcium sulphate-based screeds.
- ✓ Old substrates such as ceramic tiles, natural stones, and terrazzo
- ✓ Magnesite screeds

RECOMMENDED USES

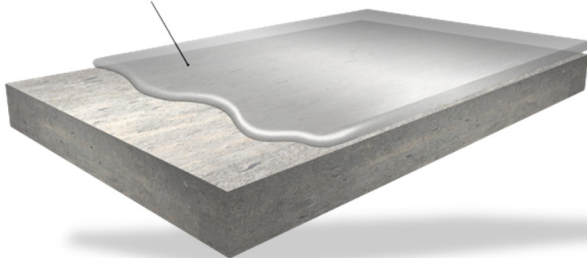
- ✓ Concrete Surfaces
- ✓ Decorative Chips/Flakes
- ✓ Decorative Quartz
- ✓ Metallic Coating System
- ✓ High/Thin Build Systems
- ✓ Mortars
- ✓ Cementitious Overlays
- ✓ Polymeric Flooring



REQUIREMENTS OF SUBSTRATE

- Adequate dryness, strength, bearing strength, evenness, and dimensional stability.
- Recommended maximum level of residual moisture should not be exceeded.
- Free of residues which reduce adhesion, e.g., dust, dirt, oil, and loose particles.
- Separation layers, sinter layers, and other similar contamination should be removed through appropriate measures, such as sanding, brushing, abrasive blast cleaning, milling or thorough cleaning.
- Old adhesive residues and levelling layers with no sufficient hardness should be removed completely by suitable mechanical means.
- Layers of water-soluble adhesives, e.g., sulphite-waste-adhesives, are to be mechanically removed.
- Old water-resistant adhesives are to be mechanically removed as far as possible.
- As used as a moisture barrier all swellable respectively not water-resistant layers must be removed completely.
- Old floors, such as ceramic tiles are to be thoroughly cleaned and sanded.
- Unheated concrete substrates must be at least 6 weeks old.
- Heated concrete substrates must be at least 3 months old and have been already heated up.

CHEMPROOF® @ 20MILS THICKNESS



REQUIREMENTS OF SUBSTRATE (CONTINUED)

- Concrete substrates may be present wettish, but free of puddles.
- Smooth and tight concrete substrates should be prepared of with a coarse surface (e.g., Diamond grinding or Shot blasting). To achieve a profile of CSP3-4.
- The requirements of the relevant valid standards, guidelines and data sheets apply.

APPLICATION & CONSUMPTION

ROLLER APPLICATION

1ST LAYER:

Approx. 300 g/m² (7.12 lb/ft²) > 23.56ft²/L

ADDITIONAL LAYER:

Approx. 200 g/m² (4.75 lb/ft²)

QUARTZ SAND (0.2 – 0.8 mm)

approx. 3-4 kg/m² (71-95 lb/ft²)

Toothed trowel application (single-layer, toothing TKB B2)

Approx. 500 g/m² (11.87 lb/ft²).

The applied quantity varies depending on roughness depth and porosity of the subfloor and differs depending on material, and subfloor temperature as well as the applicator. Low temperatures raise viscosity and therefore material consumption.

- Clean – Free of any contaminants, grease, oil, paint, curing agents, dust, loose coating, and laitance removed or any other contaminants that may prevent proper adhesion.
- Profiled – Mechanically prepared to obtain a CSP2-4

RECOMMENDED METHOD OF APPLICATION

General

- Before mixing both components, mix the **CHEM-PROOF™ SC** resin part (A) until the color is homogenous.
- Thoroughly mix **CHEM-PROOF™ SC** resin component by volume (2:A) with the **CHEM-PROOF™ SC** hardener component (1:B) until the material is homogenous and free of streaks.
- Thoroughly mixing the combined parts using a Drill mixer and Heli-mixing paddle for 3 (three) minutes.
- Repot the mixed material and mix shortly again.
- Small amounts can be mixed according to volume stated.
- Material is immediately ready for use after mixing base and activator together; no induction time is required. Do not mix more material than can be used within the working time. Material that has begun to set (thicken) cannot be satisfactorily used and must be discarded.
- Apply the **CHEM-PROOF™ SC** coat with flat or notched squeegee with EPDM rubber blade and a 10mm microfiber roller evenly on the clean substrate in cross coat. Spread material to uniform thickness.
- The second coat is applied after appropriate drying time of the first coat.
- For two-layer application take care of a minimum consumption of 500 g/m² (11.87 lb/ft²)
- In the fresh phase of the material sand in excess with clean, dry QUARTZ SAND (0,2-0,8 mm). Put forward only as much surface as can be sanded within the wet phase.



- Earliest after 12 hours, respectively after hardening sweep the exceeded sand off. Hereafter vacuum clean with an efficient industrial vacuum cleaner.
- **CHEM-PROOF™ SC** is no substitute to a moisture protection for constructions according to standard.

TOOTHED TROWEL APPLICATION

- Use a toothed trowel type TKB B2 to apply **CHEMPROOF™ SC** as a single layer.
- Pay attention to apply an even and tight coat. Avoid imperfections.
- Apply within 8 hours to provide proper adhesion for subsequent levelling compound layers.

APPLICATION AS A BONDING AGENT ON NON-ABSORBENT SUBSTRATES

Single-layer application with roller is sufficient.

- Subfloor should be thoroughly cleaned and afterwards abraded.
- Apply **CHEMPROOF™ SC** with a suitable tool, e.g. notched squeegee, roller evenly to the clean and dry substrate.

STORAGE

Store **CHEMPROOF™ SC** in cool, dry, frost-free conditions. (Ideal storage temperature 18-20°C/60-68°F). Before working bring up to room temperature.
Storage life of 18 months (in closed sealed original packaging).

DISPOSAL

- ▲ Excess material (A and B) should be mixed and allowed to cure. Cured product may be disposed without restriction.
- ▲ Uncured materials should be stored in a suitable and sealed container and may be disposed in accordance with provincial, State, municipal, and /or Federal regulations.

GISCODE

RE 1 - Solvent-free sensitising epoxy resin products.

CLEANING

Clean tools immediately after use with a solvent based cleaner. Wear suitable personal protective equipment is necessary in any case. Please, find details on in the safety data sheet.

LIMITATIONS

- ▲ Product should be used immediately after mixing.
- ▲ Requires ICRI CSP 3 This product requires proper surface profile to perform as expected. Substrate must be mechanically profiled as per (ASTM 4259-83), clean, sound, and dry.
- ▲ Do not use product that has begun to cure.
- ▲ Do not mix product longer than three minutes.
- ▲ Over mixing will initiate the curing process prematurely.
- ▲ Do not use in low-temps.
- ▲ Do not use material that has crystalized.
- ▲ Do not use over oil-based products.
- ▲ If applied at low temperature, the product might not cure properly. We strongly recommend performing tests prior using the product.
- ▲ Overheating the product could also create an exothermic reaction.

EPD - SELF-DECLARATION>>>

CHEMTEC™ COATINGS INC. stands behind the quality of its products, However, **CHEMTEC™** cannot guarantee results since **CHEMTEC™** has no control over outside operations, surface preparation, operating conditions, and application procedures. Clients are solely responsible to test the products to determine if they perform as expected and/or as per their intended projects and/or use.
Contact **CHEMTEC™ COATINGS** for additional information regarding the limitations of this product.

CHEMTEC™ COATINGS INC. declares that the product fulfills the criteria for reactive resins based on epoxy resin, unfilled, solvent free with low content of reactive diluent.

TECHNICAL & SAFETY LITERATURE

Information on the safe handling of chemical products, as well as the essential physical, safety-related, toxicological, and ecological data can be found in the current safety data sheets (MSDS/SDS).
Observe all relevant regulations, e.g., the hazardous substances act. Further instructions and additional information can be found on the internet at www.epoxychemtec.com. To acquire additional information, refer to the technical and safety literature, or contact your **CHEMTEC™** Technical Representative: 450.629.1717 or 1 844.829.1717, or via email at info@epoxychemtec.com.



WARRANTY

CHEMTEC™ COATINGS The products are warranted for one year after date of application. Please refer to the **CHEMTEC COATINGS** Limited Material Warranty for additional information.

CHEMTEC COATINGS warrants this product to be free from manufacturing defects in accord with applicable **CHEMTEC COATINGS** quality control procedures. Liability for products proven defective, if any, is limited to replacement of the defective product or the refund of the purchase price paid for the defective product as determined by **CHEMTEC™ COATINGS**. Proof of purchase may be requested. Cost of labor for application of any product specifically is excluded. NO OTHER WARRANTY OR GUARANTEE OF ANY KIND IS MADE BY **CHEMTEC™ COATINGS**, EXPRESSED OR IMPLIED, STATUTORY, BY OPERATION OF LAW OR OTHERWISE, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

LEGAL DISCLAIMER:

All information provided by **CHEMTEC COATINGS INC.** concerning **CHEMTEC COATINGS** products, including but not limited to, any recommendations and advice relating to the application and use of **CHEMTEC COATINGS** products, is given in good faith based on **CHEMTEC COATINGS's** current experience and knowledge of its products when properly stored, handled, and applied under normal conditions in accordance with **CHEMTEC COATINGS's** instructions.

In practice, the differences in materials, substrates, storage and handling conditions, actual site conditions and other factors outside of **CHEMTEC COATINGS's** control are such that **CHEMTEC COATINGS** assumes no liability for the provision of such information, advice, recommendations, or instructions related to its products.

"The user" of **CHEMTEC COATINGS** product(s) must test the product(s) for suitability for the intended application and purpose before proceeding with the full application of the product(s).

CHEMTEC COATINGS reserves the right to change the properties of its products without notice.

All sales of **CHEMTEC COATINGS** product(s) are subject to its current terms and conditions of sale which are available by calling TF [844] 829-1717, or via email at info@epoxychemtec.com.

SAFETY

Uncured epoxy resins and hardeners present certain risks hazards. Avoid skin contact and ensure adequate ventilation.

Avoid contact with skin. Some individuals may be allergic to epoxy resin. Protective gloves, facial and ocular protection, proper ventilation, and clothing are recommended.

For further details, please consult the Material Safety Data Sheet (MSDS).

- KEEP AWAY FROM CHILDREN -
- FOR INDUSTRIAL USE ONLY -

