

### DESCRIPTION

**CHEM-XTREM™ EXTREME CHEMICAL™** is a two-component, 100% solids, 0 VOC Novolac epoxy coating systems. **CHEM-XTREM™ EXTREME CHEMICAL™** offers enhanced chemical resistance including sulfuric acid up to 98% concentration and up to 4 days. This product display excellent strength, possess superior mechanical and chemical properties perfectly suited to commercial and industrial applications. **CHEM-XTREM™ EXTREME CHEMICAL™** has been designed as a topcoat, but it is self-priming. Its formulations is based on advanced high-performance novolactic technology displaying exceptional properties.

### ADVANTAGES:

- Low odour, 100% solids, zero VOCs
- Easy two-coat application
- High chemical resistance (Immersion, splashes, and spills)
- Resistant to concentrated acids and aggressive chemicals (98% sulfuric, 40% nitric, 85% phosphoric)
- Excellent adhesion to concrete
- Fast setting: ideal for fast-track projects
- Traffic abrasion resistance
- Versatile, offering self-levelling or diffusion finishes
- Resistant to water immersion
- Easy to clean and maintain

### APPLICATIONS

- Pharmaceutical
- Beverage processing
- Kitchens
- Laboratories
- Or any other installation requiring increased protection against chemical attack.
- Food processing
- Washing rooms
- Manufacturing/Fabrication
- White Rooms

### COLOURS

Grey

### TESTS

Not all surfaces are the same. It is recommended to create a sample area before starting the project. The test should be carried out on site, using the method suggested by your CHEMTEC™ representative to ensure good adhesion and color. A sample area should also be performed on existing coatings to determine if there are any contaminants or if delamination will occur.

Appropriate test procedures must be applied with regard to soil acidity and water vapour transmission. Take a pH reading to ensure that the concrete is neutral (a reading between 5 and 9 is acceptable). Use a calcium chloride test to measure water vapor transmission. Readings of 3.5 lb/1000 ft<sup>2</sup> over a period of 24 hours or less are acceptable for the application of coatings. Higher readings should be addressed with a moisture mitigation system.

### SURFACE PREPARATION

*Before applying the system, the concrete surface must be:*

- ☑ Dry - Non-wet areas (<4%) ASTM D4263
- ☑ Clean - Remove all contaminants, dust, grease, delaminated coating, laitance, or any other contaminant that may affect adhesion.
- ☑ Profiled - Mechanically profiled CSP3-6
- ☑ The surface must be mechanically prepared in accordance with CSP3-4 Standards. Ensure that the surface is free of contaminants and that pores are open and profiles to allow adequate product penetration.
- ☑ Sound - All cracks and loose areas must be treated and/or repaired. The concrete surface must be prepared by mechanical methods such as shot blasting, grinding or any other method approved by CHEMTEC™ COATINGS INC.
- ☑ Concrete must be cured for at least 28 days before applying the coating system. If the product is applied over an existing epoxy flooring system that has cured for more than one day. It must be sanded with a suitable floor machine. A mechanical bond 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 before applying CHEM-XTREME™ EXTREME CHEMICAL. If in doubt about surface preparation, perform an adhesion test.
- ☑ When using a diffusion system, the aggregate primer or intermediate coat must be sanded and cleaned to the appropriate hardness before applying the topcoat. Contact us for more details on using the product with diffusion systems.

**NOTE :** CHEM-EXTREM™ EXTREME CHEMICAL is a self-priming products that do not require priming when the concrete substrate is substrate is dry.

#### Steel:

Remove grease, oil, and contaminants from surfaces and sandblasting to obtain white metals. Please consult your CHEMTEC™ representative for further details.

For optimum performance, the coating and substrate must be kept at a temperature of between 18°C and 28°C (68 and 85°F) for 24 hours before starting work.

The same temperature range must be maintained during mixing mixing, application and curing.

- ⚠ Application in direct sunlight and increased surface temperature may cause blistering of materials due to expansion of air or moisture contained in the substrate. Concrete that has been exposed to direct sunlight must be shaded 24 hours before application and remain in the shade until initial set is complete.

# CHEM-CHEMICAL™

EXTREME CHEMICAL-RESISTANT NOVOLAC EPOXY COATING

DCC Master Format™ 09 67 00

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## Textured Fully saturated:

The product can be used to produce a fully diffused flooring system for areas requiring a more resistant floor over a conventional coating, such as loading dock areas, etc.

Follow the normal product procedure but apply the second coat at a thickness of 20 mils and sprinkle with silica until saturated (until no wet spots are visible). Allow to dry and sweep off excess aggregate. Apply a topcoat of 10 mils of CHEM-XTREM™ EXTREME CHEMICAL™.

## MIXING

Before final mixing, pre-mix parts A and B individually at low speed. Particular attention should be paid to the colored versions of the product, as the pigments may have separated from the rest of the formulation during storage. Mixing should be carried out until the color is uniform.

Next, mix 3 three parts of A and 2 two part of B together at low speed in a separate clean container. The mixing container must be clean and free of all external particles. Mix thoroughly for three (3) minutes using a low-speed drill (300-450 rpm) to minimize air entrapment. Be sure to discard the sides and bottom of the mixing container so that no unmixed material remains. Mix only the quantity needed for the specified pot life/working time.

## RECOAT

Do not recoat without sanding if the last coat has been applied for more than one day (≥24hrs). The floor surface must be sanded/grinded to a uniform matt finish. There should be no sheen on the previous coat after vacuuming and before applying the next coat.

## APPLICATION

The equipment used to mix the coating must be clean and free of any contaminants that may come from previously used.

Two coats are recommended: a primer coat and a topcoat. The first coat is applied at 8-10 mils, while the second is applied at 20 mils.

Pre-mix component "A" first to eliminate the possibility of sedimentation. In a clean container, pour component "A" and component "B".

Mix thoroughly with a drill fitted with a mixing blade for three minutes, until the color is uniform.

Immediately pour the entire mixed coating onto the prepared floor and spread the material evenly using a squeegee.

Using a lint-free microfiber roller with 10 mm bristles, pass the roller over the applied product to obtain an even layer.

Care must be taken not to roll the material too much, as air could become trapped in the coating. air could become trapped in the coating.

Apply the second coat in the same way as the first.  
(A serrated squeegee can be used for the second coat to produce a thicker film).

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EPOXY COATINGS

To obtain a non-slip finish, sprinkle with clean silica (or alumina or aluminium oxide) while it is liquid and backroll, or alternatively, the primer (first coat) can be seeded in the same way.

Allow to harden completely overnight (12-16 hours) before exposing to foot traffic or light traffic. It takes 48 hours for light traffic and 7 days for full use.

## MAINTENANCE

Occasional inspection of the installed material and spot repair can prolong system life. For specific information, contact your CHEMTEC™ representative.

## DISPOSAL

The hardened product can be disposed of without restriction. Excess liquid A and B should be mixed and allowed to harden, then disposed of in the normal way. The product can be disposed of in accordance with provincial and federal regulations. Uncured material can be removed with a suitable solvent. Follow the solvent manufacturer's instructions for use and warnings.

## PACKAGING

18.9L / 5 gal. U.S.

### PHYSICAL PROPERTIES

PROPERTIES IN LIQUID STATE AT 23°C (74°F):	VALUES
Viscosity (mixed)	1 200 cps
Solids content	100%
Application temperature	10°C-30°C (50°F-86°F)
Volumetric Ratio	3A:2B
Mixture weight (density)	1,15 kg/litre (9,6 lb/gal US)
Pot life (working time)	20 minutes
Foot traffic	16 hours
Vehicular traffic	48 hours
Full service	7 days
Curing properties	(7 days curing/50% RH) :
USDA Food & Beverage & CFIA:	Meets all requirements
Shelf life:	12 months

### PRODUCT DETAILS

PROPERTIES	VALUES	REFERENCES
Compressive strength	10,730 psi – 74MPa	ASTM D 675
Flexural strength:	957 psi – 6.6MPa	ASTM D 790
Tensile strength:	4,350 psi – 30MPa	ASTM D 638
Tensile elongation :	9.6% a la rupture	ASTM D 638-86
Bond strength (concrete):	507 psi – 3.5MPa	ASTM D 4541
	Concrete fails at this point	
Abrasion Taber:	75-80 Mgs	ASTM D 4060
Flammability:	Self-extinguishing	ASTM D 635
Hardness (Shore D):	> 81	ASTM D 2240
Water absorption:	< 0.1%	ASTM D 570
	< 0.1%	MIL D 3134
VOCs	0.5g/L	ASTM D 2396
Flash point:	>>93°C (200°F)	
Abrasion resistance (CS-17 Wheel, 1,000 g load, 1,000 cycles)	84 mg	ASTM D 4060

### CHEMICAL RESISTANCE

For the specific chemical resistance list, please refer to the CHEMTEC chemical resistance table.

### CLEANING

Immediately clean all installation equipment and tools with toluene, acetone or xylene.

### LIMITATIONS

- ▲ Requires a dry substrate. This product should not be applied to concrete substrates with high levels of moisture. Although this product can be applied in a wide range of thicknesses, limitations may apply when curing time is taken into account. All other things being equal, the thicker the film, the faster the curing time. Substrate moisture content must be <4% prior to application. Not suitable for outdoor applications. Temperature will also have an impact on curing time. Curing time can be considerably extended at very low temperatures. Keeping the product at room temperature will facilitate application and shorten curing times.
- ▲ Do not apply if substrate and ambient temperatures are below 10°C (50°F).
- ▲ Maximum relative humidity during application and curing is 85%.
- ▲ Application at low temperatures and high humidity during the curing period may result in loss of gloss and/or staining.
- ▲ Do not apply to porous surfaces where the transmission of water vapour during application is high.
- ▲ Do not use on exterior concrete substrates without a vapour-barrier.
- ▲ Protect from moisture, condensation and contact with water during the initial drying period of 24 to 48 hours.
- ▲ Do not apply the topcoat at less than 20 mils, as an orange peel finish may appear, or bubbles may form due to insufficient self-levelling of the material.
- ▲ Do not dilute the topcoat with solvent or thinner. The primer coat may be extended in certain situations with xylene or acetone up to 5% by volume. Make sure the solvent has evaporated completely before applying the second coat.
- ▲ Do not leave the mixed material (parts A and B together) in the container for a prolonged period, as it will smoke when heated and harden.
- ▲ The product is not recommended for areas subject to steam cleaning or heavy impact.
- ▲ May discolor with constant exposure to UV light or certain untested chemicals.

### STORAGE

- Store in a temperature-controlled storage.
- Do not leave directly on concrete.
- Do not freeze.

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## SHELF LIFE

One year from the date of manufacture if the product is stored in its original, unopened packaging under normal temperature-controlled storage conditions.

## DISCLAIMER

CHEMTEC™ COATINGS stands behind the quality of its products. However, CHEMTEC™ COATINGS™ cannot guarantee final results since CHEMTEC™ COATINGS has no control over surface preparation, operating conditions or application procedures. Customers are solely responsible for testing CHEMTEC™ products to determine if they perform as intended. Contact CHEMTEC™ COATINGS for more information on the limitations of this product.

## WARRANTY

CHEMTEC™ COATINGS products are warranted for one year from the date of application. Please refer to the CHEMTEC™ COATINGS Limited Warranty for details.

CHEMTEC™ COATINGS warrants our products to be free of 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. 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.

## SAFETY PRECAUTIONS

Uncured epoxy resins and hardeners present certain risks hazards. Avoid skin contact and ensure adequate ventilation. Consult Material Safety Data Sheet (MSDS) for specific instructions.

Avoid skin contact. Some people may be allergic to epoxy resin. Protective gloves, adequate ventilation and protective clothing are recommended.

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

**- KEEP OUT OF REACH OF CHILDREN -**

**- FOR INDUSTRIAL USE ONLY -**

**- KEEP FROM FREEZING -**

The information presented is, in our opinion, accurate and consistent; however, they are presented without reservation and without guarantee on the part of CHEMTEC™ COATINGS. It is therefore the user's responsibility to check this data and validate this information and the suitability of this product for the intended use. CHEMTEC™ COATINGS will not be held responsible for the use of this product in systems.

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