

# CHEM 1000™

Polyaspartic Polyurea Solvent Based

DCC Master Format™ 09 67 00 (REVISED VERSION 2.3: NOVEMBER 2021)

**CHEMTEC**  
EPOXY COATINGS

## Product Description

CHEM 1000™ is a two component, 83% solids, V.O.C compliant, aliphatic polyaspartic polyurea that was developed for UV stable floor topcoats. It provides outstanding appearance, superior chemical, UV, and solvent resistance. It exhibits excellent physical properties. This system has been approved by the Canadian Food Inspection Agency (C.F.I.A)

## Primary Applications

- ☑ Marine protection for fiberglass, steel, concrete or wood
- ☑ UV-stable topcoat
- ☑ Aircraft hangar floors
- ☑ Low temperature equipment
- ☑ Maintenance facilities
- ☑ Offshore platforms
- ☑ Industrial shop floors
- ☑ Car washes or was bays
- ☑ Primary and Secondary Containment
- ☑ Cooling Towers
- ☑ Bridges
- ☑ Wastewater treatment applications

## Advantages

- ☑ Long pot life (90 min to 100 min)
- ☑ Displays fast cure times with excellent adhesion
- ☑ Superior chemical resistance
- ☑ Superior weather and abrasion resistance
- ☑ Non yellowing and good gloss retention
- ☑ Easy to mix 1:1 ratio by volume
- ☑ Emits virtually no odors and can be applied indoors
- ☑ Excellent adhesive properties, allowing application on other firm and hard coating as well as a good bond to the substrate
- ☑ V.O.C compliant in all 50 states of Canada

## Technical Data

Packaging	1 US GAL, 2 US GAL, 3 US GAL, 15 US GAL, 150 US GAL, 750 GAL	
Color	Upon Request	
Yield/Recommended Thickness	Primer	
	CHEM 1000	5-10 mils D.F.T (350-150 sf/gal)
	Finish Coat	
	CHEM 1000	5-10 mils D.F.T (350-150 sf/gal)
Shelf Life	12 months in original unopened factory sealed containers. Keep away from extreme cold, heat or moisture. Keep out of direct sunlight and away from fire hazards	
Mix Ratio, by volume	A: B-1:1	
Mix Ratio, by weight (grams)	A: B = 100:110	
Working Time	15 minutes	
Pot Life (454 g)	90-100 minutes @ 25 °C	

## Properties @ 23 °C (73 °F) AND 50% R.H

Solids, content by volume	Part A	Part B	Mix
Clear	93%	78%	85%
Solids Content, by weight	Part A	Part B	Mix
Clear	92%	75%	83%
Density (kg/L)	Part A	Part B	Mix
	1.06	1.15	1.11
Thinner Recommended	SCT-0001		



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Drying Times	
Tack Free	4-6 hours
Recoat Time	6-10 hours
Foot Traffic	12-24 hours
Heavy Equipment Traffic	>48 hours
Abrasion Resistance (psi), ASTM D4060	
Taber Abraser CS-17 Wheel/ 1000g (2.2 lbs.)/1000 cycles	30 mg loss
Adhesion, ASTM D4541	
Concrete-primer	>550 psi (substrate ruptures)
Water Absorption, ASTM D570	0.2%
Water Vapour Transmission ASTM E96	
Water procedure B Film 0.01 cm (0.004")	RESULTS NOT AVAILABLE YET
Hardness (Shore D), ASTM D2240	75-78
Flexibility, 1/8" Mandrel, ASTM D1737	Pass
Falling Sans Abrasion Resistance (L sand / 1 dry mil), ASTM D968	45
Viscosity @ 25 °C	
Part A	350-450 cps
Part B	75-100 cps

A/B Mix	125-225 cps
Gloss, ASTM D523	95+
Permeance, ASTM E96	
Water Procedure B	RESULTS NOT YET AVAILABLE
Fire Rating CAN/ULC 102	
Flame spread	RESULTS NOT YET AVAILABLE
Smoke developed	RESULTS NOT YET AVAILABLE
Tensile Strength, ASTM D638	6500-7500 psi
Compressive Strength (psi MPA) ASTM D695	9500
*W/Quartz	13700
*W/Chips	12200
Elongation at Break, ASTM D638	100%
Tear Strength (PLI), ASTM D2240	350
VOC	0 g/l

Please note, that the indicated mileage is calculated for flat surfaces. A porous or imperfect surface will require more material in order to cover the same mileage\* \*\* Please note that the indicated viscosity is for clear product only. Any addition of colorant may affect the viscosity



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## Surface

### Old Concrete

Concrete surface must be cleaned. BLASTRAC, sand blasting, diamond grinder w/30 grit or coarse, or water blasting is highly recommended to remove surface contaminants. Any oils and fats must be removed prior to product application. Acid etching may be required (followed by a thorough rinsing) to open the pores of the concrete to accept a primer. Do not apply to wet substrates. Chloride, moisture, and pH levels should be checked prior to application. In almost every application a primer is recommended prior to use of CHEM 1000

### New Concrete

The concrete should be allowed to cure for a minimum of 30 days. Compression resistance of concrete must be at least 25 MPa (3625 lbs./inch<sup>2</sup>) after 28 days and traction resistance must be at least 1,5 MPa (218 lbs./inch<sup>2</sup>). BLASTRAC, sand blasting, diamond grinder w/30 grit or coarser or acid etching (followed by a thorough rinsing) is required to remove the surface laitance that appeared during the curing process. A primer should be used to reduce out-gassing and promote adhesion.

## Mixing

Material should be pre-conditioned to a minimum of 10 °C prior to use. Thoroughly mix each component separately using paddle mixers and a drill for a minimum of 2 minutes to place the solids content evenly in suspension. Pour component B into component A using the proper mixing ratio of 1A:1B by volume. Mix both components for at least 3 minutes using a drill at low revolution (300 to 450 rpm) to reduce trapping of air. While mixing, scrape bottom and walls of container at least once to ensure a homogenous mix. Only prepare quantity that may be applied during pot life of mixture.

## Application

Apply mixed product on the prepared surface lightly (thin film) using a rubber rake and pass a roller to obtain a uniform coating. Avoid creating puddles.

## Cleaning

Clean all application equipment with a specified cleaner. Once the material hardens it can only be removed mechanically. If the product splatters, wash thoroughly with hot soapy water

## Overlaps

Subsequent overlaps must be applied when primer is still wet or tacky. If primer has dried, reprime. Porous substrates may require multiple priming

## Suggestions

Sprinkle the primed area lightly with aggregate to provide better footing.

## Restrictions

- Minimum/Maximum temperature of substrate: 5°C / 30 °C (42 °F / 86 °F).
- Maximum relative humidity during application and curing: 85 %.
- Substrate temperature must be 3 °C (5 .5 ° F) above dew point measured.
- Humidity content of substrate must be <4% when coating is applied.
- Do not apply on porous surfaces where a transfer of humidity may occur during application.
- Protect from humidity, condensation and contact with water during the 24-hour initial curing period
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## Health and Safety

In case of skin contact, wash with water and soap. In case of eye contact, immediately rinse with water for at least 15 minutes. Consult with a doctor. For respiratory problems,



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transport victim to fresh air. Remove contaminated clothes and clean before reuse.

Components A and B contain toxic ingredients. Prolonged contact of this product with the skin is susceptible to provoke an irritation. Avoid eye contact. Contact with may cause serious burns. Avoid breathing vapors release from this product. This product is a strong sensitizer. Wear safety glasses and chemical resistant gloves. A breathing apparatus filtering organic vapors approved by the NIOSH/MSHA is recommended. Predict suitable ventilation.

**\*Consult the material safety data sheet for further information.\***

## 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](http://www.epoxychemtec.com). To acquire additional information, refer to the technical and safety literature, or contact your CHEMTEC Technical Representative: 1 844.829.1717, or via email at [info@epoxychemtec.com](mailto:info@epoxychemtec.com).

## Warranty

**CHEMTEC™ COATINGS** warrants this product to be free from manufacturing defects. 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** will replace at no charge the quantity of the Coating that **CHEMTEC COATINGS** determines has failed to perform, as the sole and exclusive remedy for any breach of this warranty and/or any other defect or failure of the coating. Proof of purchase is required. Cost of labor for application of any product specifically is excluded.

**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](mailto:info@epoxychemtec.com).

## SAFETY

Consult **CHEM 1000™** Safety Data Sheet.

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

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

