

CHEM-NATURAL

100% Solids, High Performance providing Excellent UV Resistance

PRODUCT DESCRIPTION

The CHEM-NATURAL is a two-component epoxy coating system which is VOC-free, 100% solids and is virtually odor free. The product is translucent and displays an excellent resistance to UV irradiation (excellent color retention over time) best suited for residential and commercial applications. It possesses superior mechanical and chemical properties as well as a long pot life and working time. Ideal for metallic systems. It can also be used as a topcoat for Art & General epoxy projects as well as on CHEM-CAST and CHEM-THICK products (see section, CASTING APPLICATIONS). CHEM-NATURAL has been designed as a top coat epoxy but it is self-priming. CHEM-NATURAL formulation is based on a high-performance cycloaliphatic polyamine technology displaying outstanding

USES

CHEM-NATURAL provides excellent resistance for the most demanding applications:

- Metallic finishes
- Kitchen or countertop re-glazing
- Small casting projects
- Art projects
- Top-coating
- Sealing

ADVANTAGES

- Offering one of best UV resistance in the industry
- 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 (75 minutes)
- Ideal for metallic epoxy systems
- Good elongation and excellent abrasion resistance
- High resistance to amine blush and contamination (fish eyes)
- Excellent for letting out bubbles, even for thick layers
- Superior mechanical and chemical properties
- Impermeability / low moisture sensitivity
- High density of the product prevents dirt penetration resulting in low maintenance post application

TECHNICAL DATA SHEET

Art & General Superior Epoxy System: *CHEM-NATURAL*

Last update: February 2019

APPLICATION DATA

Mix Ratio	2A:1B	
Packaging	3 gallon kits (3 x 3,5L) 1 gallon kit (1 x 3,5L)	
Color	Clear only	
Solids Coverage / US GAL	<u>Mils</u>	<u>Sq. Ft.</u>
	8	200
	10	160
	12	133
	30	54
	40	40
	50	32
	1/8"	13*
1/4"	6*	
Shelf Life	One year, in original unopened factory pails under normal storage conditions	
Substrate temp.	Min 16°C, Max 30°C	
Cure Time		
Working time	75 min	22°C and 55% rel. hum
Tack free	8 hours	22°C and 55% rel. hum
Dry	48 hours	22°C and 55% rel. hum
Hard	1 week	22°C and 55% rel. hum
Solids Content	100%	

TECHNICAL PROPERTIES

Hardness, Shore D	ASTM D2240	80
Viscosity	Clear	700-800 cps

SURFACE PREPARATION

Concrete / wood / metal or substrate 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.

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. ft. during a 24-hour period or less are acceptable for applying coatings. Higher results should receive a moisture mitigation system. Surface must be prepared mechanically in line with CSP-3-4. 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 system that has been cured for a period longer than 72 hours, it should be sanded with a proper 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 prior applying the *CHEM-NATURAL*. 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 sanded and cleaned after appropriate hardness is reached prior applying the top coat. Contact us for more details on how to use the product with broadcast systems.

MIXING

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 particle. Mix thoroughly for three minutes using a low speed drill (300-450 rpm) to minimize the entrapping of air. Make sure to scrap sides and bottom of mixing container so no unmixed material remains. Mix only the necessary quantity to be used according to the specified pot life / working time.

APPLICATION

Apply only when air and substrate temperature is between 16-30°C and the relative humidity less than 85%. The product has been especially designed to adhere on concrete surfaces.

CHEM-NATURAL is self-priming. When used as a base coat, apply with a squeegee in thin coat 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 multi-directional (north-south, east-west) motion to ensure proper coating thickness.

We recommend the application of one base coat and one top coat for total system thickness of approximately 20 mils for standard systems. For metallic systems, the top coat can be applied at thickness level between 40 and 50 mils. The Epoxy Metallic System requires specific installation steps (Refer to the newsletter "Installation of Metallic System" or contact us for additional details).

We recommend the CHEMTEC vinyl chips when installing a flake system. Proper testing should be conducted prior application.

For high traffic applications, it is recommended to use CHEMTEC EPOXY PRIMER before installing the CHEM-NATURAL. The EPOXY PRIMER will seal the slabs and display higher flexibility. A thickness of 4-6 mils is recommended for the EPOXY PRIMER. CHEMTEC EPOXY PRIMER cures within 4-6 hours under normal conditions while proving a working time of 45 minutes (contact us for more details about CHEMTEC EPOXY PRIMER).

CASTING APPLICATIONS

For casting applications, CHEM-NATURAL is recommended as a top coat. It is used along with CHEM-CAST products. Its transparency and viscosity allow pouring up to 1/4 "and provides a smooth, crystal clear, bubble-free result ideal for art and hobby applications. Similar than concrete floor applications, make sure the surface is clean and no contaminants are present before applying. It is best to use a serrated squeegee for the application. When mixing parts A and B, avoid mixing at high speed to minimize air entrapment. During installation, avoid excessive handling of the product in order to limit the entrapment of air in the film. Air entrapment can affect the appearance of the surface during the curing process. Refer to the application information provided in this products Data Sheets for further details including recoat windows.

RECOAT

Do not recoat without sanding if last coating of the product has been applied for more than 72 hours. The surface should be sanded/abraded until a uniform dullness is achieved. There should be no gloss on the prior coating after vacuuming and before applying the next coat.

CLEAN UP

Excess material (A and B) should be mixed together and allowed to cure. Cured product may be disposed of without restriction. Uncured material should be stored in a suitable and sealed container and may be disposed in accordance with provincial and federal regulations.



TECHNICAL DATA SHEET

Art & General Superior Epoxy System: *CHEM-NATURAL*

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LIMITATIONS

Requires a dry substrate. This product should not be applied to concrete substrates that show high levels of moisture/humidity. 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. Moisture content of the substrate must be <4% prior to application. Not suited for exterior applications. Temperature will also impact curing time. Curing time may extend significantly at very low temperature levels. Keeping the product

stored at room temperature will make the application easier and dry times shorter.

CHEMTEC COATINGS stands behind the quality of its products. However, CHEMTEC COATINGS cannot guarantee final results since CHEMTEC has no control over surface preparation, operating conditions and application procedures. Clients are solely responsible to test CHEMTEC'S products to determine if they perform as expected. Contact CHEMTEC COATINGS for further information regarding the limitations of this product.

AVAILABLE COLORS

Clear

Refer to the most recent Material Safety Data Sheet prior using this product

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