



Using CHEMCLAD® GP

General Purpose High Performance Polymer Composite Coating System for Industrial/Commercial Applications In Standard Chemical Environments

PLEASE READ THESE INSTRUCTIONS AND SAFETY DATA SHEET (SDS) CAREFULLY PRIOR TO USE

CHEMCLAD® GP is a two component, 100% solids, high performance, general purpose polymer system used for creating an outstanding corrosion and chemical resistant protective coating on all types of equipment and structures.

CHEMCLAD® GP is simple to use. It mixes easily and can be applied by brush, roller or spray. It is available in different colors to simplify overcoating. This self-leveling, high gloss coating yields a surface that's not only functional, but also aesthetically pleasing. CHEMCLAD® GP is also available in 'safety yellow'.

SURFACE PREPARATION

CHEMCLAD® GP should only be applied to clean, firm, dry, and well roughened surfaces.

1. Remove all loose material and surface contamination.
2. Depending on the surface, solvent clean and / or remove contamination by abrasive blasting, steam cleaning, pressure washing or other suitable means.
3. New concrete should be allowed to cure for a minimum of 28 days prior to treatment. Insure that all laitance is removed from cementitious surfaces before applying CHEMCLAD® GP.
4. After removing all surface and sub-surface contamination, flush the area as necessary and allow to dry completely.
5. Metallic surfaces should be abrasive blasted to achieve a 'white metal' finish and a 3 mil profile. Commence the application of the CHEMCLAD® GP immediately upon completion of surface preparation and before any oxidation takes place.

PRIMING CONCRETE SURFACES

Prior to applying CHEMCLAD® GP to concrete and / or cementitious substrates, the surface should be treated with CHEMCLAD® P4C to seal the surface, minimize out-gassing and insure that optimum adhesion is obtained. CHEMCLAD® P4C is a two component, water borne, polymeric "adhesion enhancer" specifically formulated to help seal concrete / cementitious surfaces and insure optimum interface bonding between the surface and the CHEMCLAD® GP.

Combine the two components and mix thoroughly until a uniform, streak-free, off-white color is achieved. Apply the mixed CHEMCLAD® P4C to the surface using a brush or roller. Coat the area thoroughly but DO NOT flood or pool the CHEMCLAD® P4C.

After first mixing the Base and Activator components together, the CHEMCLAD® P4C may be thinned using a small amount of water to improve application characteristics.



As a guide, the maximum amount of water which may be added is 1 part water to 4 parts mixed CHEMCLAD® P4C. While thinning with water does not increase coverage rate, it will help insure that the optimum coverage rate is achieved for the given surface conditions.

While surface contour, roughness, porosity, etc. can affect coverage rate, as a guide, each kilogram of CHEMCLAD® P4C will cover approximately 70 - 80 square feet (6 - 7 square meters) when applied at the recommended dry film thickness of 3 mils on a relatively smooth, uniform surface.

Note: Should less than a full unit quantity of CHEMCLAD® P4C be required for a particular application, a partial mix can be accomplished by mixing 2 parts Base to 5 parts Activator by volume (2:5, v/v).

All CHEMCLAD® P4C must be applied and overcoated with CHEMCLAD® GP in accordance with the following guidelines:

CHEMCLAD® P4C Technical Data			
Theoretical coverage rate per kg. @ 3 mils.		70 - 80 ft ² / 6 - 7 m ²	
Mixing ratio	Base	Activator	
-by volume	2	5	
-by weight	2	5	
Ambient Temperature	Working Life	Minimum Overcoating	Maximum Overcoating
41°F 5°C	120 min	16 hrs	48 hrs
59°F 15°C	75 min	12 hrs	36 hrs
77°F 25°C	60 min	8 hrs	24 hrs
86°F 30°C	50 min	5 hrs	16 hrs

Note: On severely pitted concrete floors / floor areas, the use of the ENECLAD® Self Priming Screed is recommended as an alternative to the CHEMCLAD® P4C.

MIXING AND APPLICATION

CHEMCLAD® GP is supplied in pre-measured quantities to simplify mixing of full units. Simply pour the contents of the Activator container into the Base container; then, using the supplied stirrer or a paint mixer in an electric drill, mix thoroughly until a uniform, streak-free color is achieved. Apply the mixed CHEMCLAD® GP to the prepared (and / or primed) surface using a brush, squeegee or roller. As a guide, a coverage rate of 50 - 55 square feet (5 square meters) per kilogram should result in an applied thickness of approximately 6 - 7 mils on a relatively smooth surface.

Note: Shape, contour, porosity, roughness, etc. will affect the coverage obtainable. Since a minimum of two coats are recommended, CHEMCLAD® GP is available in different colors to simplify overcoating.

Technical Data

Volume capacity per kg.	48 in ³ / 781 cc	
Mixed density	0.044 lbs per in ³ / 1.28 gm per cc	
Coverage rate per kg. @ 6-7 mils.	50 - 55 ft ² / 5 m ²	
Shelf life	Indefinite	
Volume solids	100%	
Mixing ratio	Base	Activator
By volume	5	2
By weight	3.6	1

Working Life & Cure Times

Ambient Temperature	Working Life	Touch Dry	Maximum Overcoating	Full Cure
41°F 5°C	110 min	55 hrs	96 hrs	10 days
59°F 15°C	90 min	24 hrs	48 hrs	6 days
77°F 25°C	70 min	16 hrs	24 hrs	4 days
86°F 30°C	55 min	8 hrs	16 hrs	3 days

Physical Properties

	Typical Values		Test Method
Tensile Shear Adhesion			
Steel	3600 psi	253 kg/cm ²	ASTM D-1002
Aluminum	2600 psi	182 kg/cm ²	ASTM D-1002
Copper	2300 psi	161 kg/cm ²	ASTM D-1002
Stainless steel	3300 psi	232 kg/cm ²	ASTM D-1002

Elcometer Adhesion - to properly prepared cementitious surfaces is greater than the cohesive strength of the substrate.

Chemical Resistance

Acetic acid (0-10%)	G	Methyl ethyl ketone	NR
Acetic acid (10-20%)	NR	Naptha	EX
Acetone	NR	Nitric acid (0-10%)	G
Aviation fuel (JP-4)	EX	Nitric acid (10-20%)	G
Butyl alcohol	EX	Phenol	NR
Calcium chloride	EX	Phosphoric acid (0-10%)	G
Carbon tetrachloride	G	Phosphoric acid (10-20%)	G
Chloroform	NR	Potassium chloride	EX
Crude oil	EX	Propyl alcohol	EX
Diesel oil	EX	Skydrol	G
Ethyl alcohol	G	Sodium chloride	EX
Gasoline	EX	Sodium hydroxide	EX
Heptane	EX	Sulfuric acid (0-10%)	EX
Hydrochloric acid (0-10%)	EX	Sulfuric acid (10-20%)	EX
Hydrochloric acid (10-20%)	EX	Toluene	NR
Kerosene	EX	Trichlorethylene	NR
Methyl alcohol	G	Xylene	G

EX - Suitable for most applications including immersion. G - Suitable for intermittent contact, splashes, etc. NR- Not recommended

HEALTH & SAFETY

Every effort is made to insure that ENECON[®] products are as simple and safe to use as possible. Normal industry standards and practices for housekeeping, cleanliness and personal protection should be observed. For further information and guidance, please refer to the detailed SAFETY DATA SHEETS (SDS) supplied with the material and also available on request.

CLEANING EQUIPMENT

Wipe excess material from tools immediately. Use acetone, MEK, isopropyl alcohol or similar solvent as needed.

TECHNICAL SUPPORT

The ENECON[®] engineering team is always available to provide technical support and assistance. For guidance on difficult application procedures or for answers to simple questions, call your local ENECON[®] Fluid Flow Systems Specialist or the ENECON[®] Engineering Center.

All information contained herein is based on long term testing in our laboratories as well as practical field experience and is believed to be reliable and accurate. No condition or warranty is given covering the results from use of our products in any particular case, whether the purpose is disclosed or not, and we cannot accept liability if the desired results are not obtained.

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