



Using ENECLAD® FPS

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

Easy to apply ENECLAD® FPS seals and protects concrete floors. This extraordinary high-performance polymer composite is extremely abrasion resistant, making it ideal for heavy traffic areas in warehouses, hangars, loading docks, etc. ENECLAD® FPS jackets the surface in a durable, rugged coating that resists forklift traffic, oil, gasoline and many common industrial chemicals.

ENECLAD® FPS is a solvent-free, virtually odor-free, two-component product specifically developed to solve some of the toughest industrial floor protection problems. It is easily applied by brush, roller or squeegee to a super high-gloss finish. Non-skid aggregates can be incorporated into the ENECLAD® FPS to provide a highly durable, slip resistant surface.

SURFACE PREPARATION

ENECLAD® FPS should only be applied to clean, firm, dry, and well roughened surfaces.

1. Brush loose dirt from the surface to be coated and remove all oil, grease and other contaminants using a solvent which leaves no residue such as acetone, MEK, isopropyl alcohol, etc.
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 ENECLAD® FPS.
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 ENECLAD® FPS immediately upon completion of surface preparation and before any oxidation takes place.

PRIMING CONCRETE SURFACES

Prior to applying ENECLAD® FPS 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 ENECLAD® FPS.

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 ENECLAD® FPS 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

ENECLAD® FPS 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 ENECLAD® FPS to the prepared (and / or primed) surface using a brush, squeegee or roller. As a guide, a coverage rate of 25 square feet (2.3 square meters) per kilogram should result in an applied thickness of approximately 12 mils on a relatively smooth surface.

Note: Shape, contour, porosity, roughness, etc. will affect the coverage obtainable.

OVERCOATING

When applying multiple layers of ENECLAD® FPS, the best time to do so is when the previously applied material is just surface tacky. If overcoating is not done within the maximum times specified, the surface must be abraded prior to the application of additional material.

Technical Data		
Volume capacity per kg.	46 in ³ / 750 cc	
Mixed density	0.048 lbs per in ³ / 1.31 gm per cc	
Coverage rate per kg. @ 12 mils / 300 microns	25 ft ² / 2.3 m ²	
Shelf life	Indefinite	
Volume solids	100%	
Mixing ratio	Base	Activator
By volume	2	1
By weight	3	1

Working Life & Cure Times

Ambient Temperature	Working Life	Touch Dry	Maximum Overcoat	Full Cure
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
Compressive strength	11,000 psi	770 kg/cm ²	ASTM D-695
Flexural strength	9,000 psi	630 kg/cm ²	ASTM D-790
Hardness - Shore D	86		ASTM D-2240
Abrasion resistance	35 mg / 1,000 cycles		ASTM D-4060
Shear adhesion - steel	4,100 psi	287 kg/cm ²	ASTM D-1002
Elcometer Adhesion - to properly prepared cementitious surfaces is greater than the cohesive strength of the substrate.			

Chemical Resistance

Gasoline	EX	Detergent Solution	EX
Kerosene	EX	Trisodium Phosphate	EX
50% Anti-Freeze	EX	20% Calcium Chloride	EX
Transmission Fluid	EX	10% Hydrochloric Acid	EX
Power Steering Fluid	EX	10% Sulfuric Acid	EX
Motor Oil	EX	10% Sodium Hydroxide	EX

EX - Suitable for most applications including immersion.
G - Suitable for intermittent contact, splashes, etc.

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 MATERIAL SAFETY DATA SHEETS (MSDS) 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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