METALCLAD® CeramAlloy® CL+AC

Outstanding erosion/corrosion resistance!

- Apply by Brush, Roller or Flexible Applicator
- Requires No Heat
- Unlimited Shelf Life
- 100% Solids
- Safe & Simple To Use

METALCLAD® CeramAlloy® CL+AC is a High Performance Polymer Composite for resurfacing and protecting all types of fluid flow equipment from aggressive erosion and corrosion damage.

Qualified for AFFF Stations and high-traffic interior passageways on U.S. Navy vessels as detailed in MIL-PRF-32171

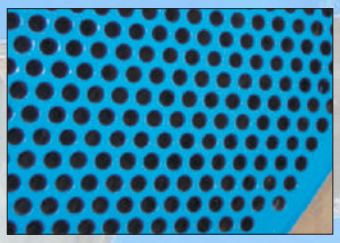
Repairs & Protects...

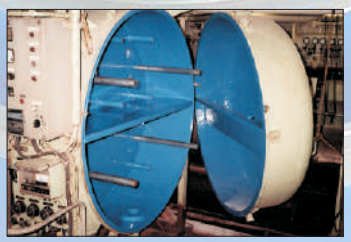
- Heat Exchanger Tube Sheets & Water Boxes
- Pumps
- Valves & Pipework
- Housings & Tanks
- Cooling Towers

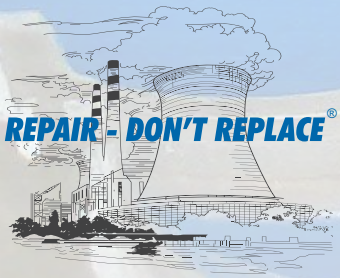
...and more

METALCLAD® CeramAlloy® CL+AC is a two component, 100% solids, liquid polymer composite used for repairing, resurfacing and coating both damaged and new components to provide outstanding fluid flow erosion and corrosion resistance.

When mixed, *CeramAlloy® CL+AC* is a viscous liquid. *CeramAlloy® CL+AC* cures to a hard, ceramic-like material with an extremely smooth surface finish.







ENECON® Corporation
The Fluid Flow Systems Specialists.
www.enecon.com
Toll Free: 888-4-ENECON (888-436-3266)
Tel: 516-349-0022 · Fax: 516-349-5522
info@enecon.com
6 Platinum Court · Medford, NY 11763-2251

Technical Data

Volume capacity per kg.	36 in^3 / 592 cc
Mixed density	0.061 lbs per in^3 / 1.69 gm per cc
Coverage rate per kg. @ 12 - 15 mils	14 - 16 ft^2 / 1.4 m^2
Shelf life	Indefinite
Volume solids	100%

Mixing ratio	Base	Activator
By volume	3.3	1
By weight	6	1

Working Life & Cure Times

Ambient Temperature		Working Life	Machining Light Load	Full Mechanical	Chemical Immersion
41°F	5°C	4 hrs	48 hrs	96 hrs	10 days
59°F	15°C	2 hrs	24 hrs	48 hrs	5 days
77°F	25°C	1 hr	12 hrs	24 hrs	3 days
86°F	30°C	40 min	8 hrs	20 hrs	2 days

Physical Properties

	Typical Values		Test Method
Compressive strength	13,500 psi	945 kg/cm^2	ASTM D-695
Flexural strength	8,000 psi	560 kg/cm^2	ASTM D-790
Hardness - Shore D	85		ASTM D-2240
Taber Abrasion Resistance			
CS-17 Wheel, 1000 cycles, 1 Kg Load Dry - 12.5 mm^3 loss			ASTM D-4060
H-10 Wheel, 1000 cycles, 1 Kg Load Wet - 160.6 mm^3 loss			ASTM D-4060
Tensile Shear Adhesion			
Steel	4000 psi	280 kg/cm^2	ASTM D-1002
Aluminum	2500 psi	175 kg/cm^2	ASTM D-1002
Copper	3000 psi	210 kg/cm^2	ASTM D-1002
Stainless steel	4100 psi	287 kg/cm^2	ASTM D-1002
Surface resistivity	1×10^{15} ohms		ASTM D-257
Volume resistivity	1×10^{15} ohm/cm		ASTM D-257
Dielectric constant	7.5		ASTM D-150
Dielectric strength	652 volts/mil		ASTM D-149
Breakdown voltage	6.1 Kv		ASTM D-115

Chemical Resistance

Acetic acid (0-10%)	EX	Methyl alcohol	G
Acetic acid (10-20%)	G	Methyl ethyl ketone	G
Acetone	G	Nitric acid (0-10%)	EX
Aviation fuel	EX	Nitric acid (10-20%)	G
Butyl alcohol	EX	Phosphoric acid (0-5%)	EX
Calcium chloride	EX	Phosphoric acid (5-10%)	G
Crude oil	EX	Potassium chloride	EX
Diesel fuel	EX	Propyl alcohol	EX
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%)	G
Hydrochloric acid (10-20%)	G	Toluene	G
Kerosene	EX	Xylene	EX

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

Using CeramAlloy® CL+AC

Surface Preparation - METALCLAD® CeramAlloy® CL+AC should only be applied to clean, dry and well roughened surfaces.

1. Remove all loose material and surface contamination and clean with a suitable solvent which leaves no residue on the surface after evaporation such as acetone, MEK, isopropyl alcohol, etc.
2. Clean/roughen surface by abrasive blasting.
3. If necessary, apply moderate heat and/or allow the component(s) to 'leach' to remove ingrained contaminants.
4. Thoroughly roughen surfaces by abrasive blasting to achieve a 'white metal' degree of cleanliness and an anchor pattern of 3 mils.

Note: In situations where adhesion is not desired, such as when making molds and patterns or to ease future disassembly, apply a suitable release agent (mold release compound, paste wax, etc.) to the appropriate surfaces.

Mixing & Application - For your convenience, the CeramAlloy® CL+AC Base and Activator have been supplied in precisely measured quantities. Simply pour the entire contents of the Activator container into the Base container and, using a spatula, putty knife or other appropriate tool, mix thoroughly until the CeramAlloy® CL+AC reaches a uniform, streak-free color.

Apply the mixed material to the prepared surface using a stiff-bristled brush, applicator or roller. As a guide, an even thickness of approximately 12-15 mils per coat should be obtained. A minimum two coat application is required.

Overcoating should ideally be performed when the previously applied coat is just surface tacky; and certainly within 8 hours of the previous coat.

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.

Please refer to the detailed SAFETY DATA SHEET (SDS) supplied with the material (also available on request) for more information.

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.

Printed in the USA
February, 2023