

# METALCLAD<sup>®</sup> **DurAlloy<sup>®</sup>**

**Repairs to all types of equipment,  
including in-place shaft repairs...**

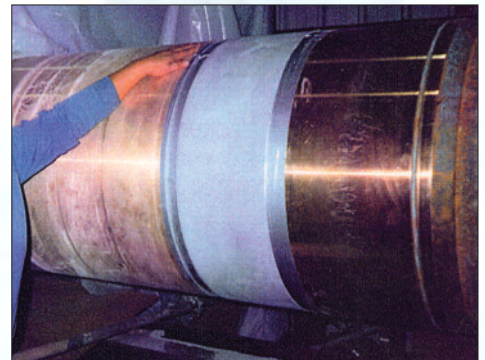
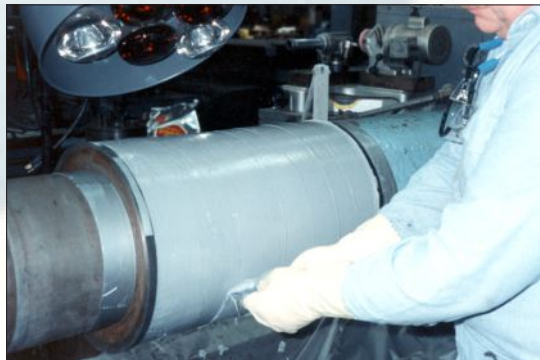
- Machineable
- Trowelable
- Requires No Heat
- Unlimited Shelf Life
- 100% Solids
- Safe & Simple To Use



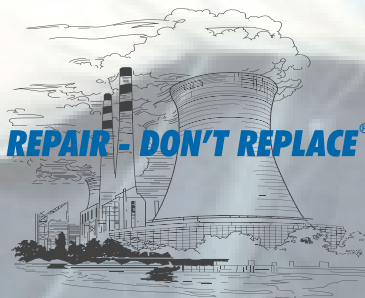
## Repairs...

- Worn Shafts
- Cracked & Holed Casings
- Oversized Bearing & Bush Housing
- Scored Rams
- Sloppy Keyways
- Stripped Threads
- Warped, Distorted or Steam-Cut Flange Faces

**METALCLAD<sup>®</sup> DurAlloy<sup>®</sup>** is a two-component, 100% solids, multi-purpose polymer composite which can be easily machined on a lathe, drilled, tapped, filed, sanded and polished...



When properly mixed, **METALCLAD<sup>®</sup> DurAlloy<sup>®</sup>** is a non-sagging paste which quickly cures to a metal-hard material creating a permanent bond to any rigid surface such as metal, plastic, glass, wood, concrete and more.



**ENECON<sup>®</sup> Corporation**  
The Fluid Flow  
Systems Specialists.

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## Technical Data

Volume capacity per kg.	25 in <sup>3</sup> / 410 cc	
Mixed density	0.088 lbs per in <sup>3</sup> / 2.44 gm per cc	
Coverage rate per kg. @ 0.25 in / 6 mm	100 in <sup>2</sup> / 0.064 m <sup>2</sup>	
Shelf life	Indefinite	
Volume solids	100%	
Mixing ratio	Base	Activator
By volume	3	1
By weight	5	1

## Working Life & Cure Times

Ambient Temperature	Working Life	Machining/ Light Load	Full Mechanical	Chemical Immersion
41°F 5°C	40 min	1 day	4 days	7 days
59°F 15°C	25 min	5 hrs	2 days	3 days
77°F 25°C	20 min	2 hrs	1 day	2 days
86°F 30°C	15 min	1.5 hrs	16 hrs	1 day

## Physical Properties

Typical Values	Test Method
Compressive strength 13,500 psi 945 kg/cm <sup>2</sup>	ASTM D-695
Flexural strength 9,500 psi 665 kg/cm <sup>2</sup>	ASTM D-790
Izod impact strength 1.2 ft lbs/in 0.69 j/cm	ASTM D-256
Hardness - Shore D 86	ASTM D-2240
Tensile Shear Adhesion	
Steel 3600 psi 252 kg/cm <sup>2</sup>	ASTM D-1002
Aluminum 2000 psi 140 kg/cm <sup>2</sup>	ASTM D-1002
Copper 3000 psi 210 kg/cm <sup>2</sup>	ASTM D-1002
Stainless steel 3500 psi 245 kg/cm <sup>2</sup>	ASTM D-1002
Surface resistivity 1 x 10 <sup>15</sup> ohms	ASTM D-257
Volume resistivity 1 x 10 <sup>15</sup> ohm/cm	ASTM D-257
Dielectric constant 7.5	ASTM D-150

## Chemical Resistance

Acetic acid (0-10%) . . . . . EX	Methyl alcohol . . . . . G
Ammonium hydroxide (0-10%) . . EX	Mineral oil . . . . . EX
Aviation fuel . . . . . EX	Nitric acid (0-10%) . . . . . EX
Butyl alcohol . . . . . EX	Nitric acid (10-20%) . . . . . G
Calcium chloride . . . . . EX	Phosphoric acid (0-10%) . . . . . 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 DurAlloy®

**Surface Preparation** - METALCLAD® DurAlloy® should only be applied to clean, dry and well roughened surfaces.

1. Remove all loose material and surface contamination.
2. Clean with a suitable solvent which leaves no residue on the surface after evaporation such as acetone, MEK, isopropyl alcohol, etc.
3. If necessary, apply moderate heat to remove ingrained oil and clean again with solvent.
4. Roughen surface by abrasive blasting, grinding, rotary file or other appropriate means.

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 METALCLAD® DurAlloy® Base and Activator have been supplied in precisely measured quantities to simplify mixing of full units. Should a small amount of material be required, measure out three parts Base and one part Activator by volume (3:1, v:v) on a clean mixing surface. Keep Base and Activator separated until ready to mix and apply.

Using a spatula, putty knife or other appropriate tool, mix thoroughly until all streaks disappear, resulting in a uniform color and consistency. Spread material out in a thin layer over the mixing surface to force out any trapped air. This procedure will also maximize working time.

Some applications such as holed pipes or tanks and cracked casings may require the use of reinforcement tape to bridge the damaged area(s) followed by the application of additional material to completely cover the reinforcement tape.

**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 SHEETS (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.



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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