Revolutionary products . . .

. . . for rebuilding, resurfacing and protecting all types of fluid flow machinery, equipment and structures.

METALCLAD DurAlloy™

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

Repairs to all types of equipment.

A permanent bond to any rigid surface

Metal · Plastic · Glass · Wood · Concrete and More!

METALCLAD DurAlloy™ 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 DurAlloy™ is a non-sagging paste which quickly cures to a metal-hard material.

- **Worn shafts**
- **Cracked & holed casings**
- **Oversize bearing & bush housings**
- **Scored rams**
- **Sloppy keyways**
- **Stripped threads**
- **Warped, distorted or steam-cut flange faces**

ENECON® Corporation
The Fluid Flow Systems Specialists.

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Technical Data

Volume capacity per kg.	25 in^3 / 410 cc
Mixed density	0.088 lbs per in^3 / 2.44 gm per cc
Coverage rate per kg. @ 0.25 in / 6 mm	100 in^2 / 0.064 m^2
Shelf life	Indefinite
Volume solids	100%

Mixing ratio	Base	Activator
By volume	3	1
By weight	5	1

Cure Times

Ambient Temperature		Working Life	Machining Light Load	Full Mechanical	Chemical Immersion
41°F	5°C	40 min	24 hrs	96 hrs	7 days
59°F	15°C	25 min	5 hrs	48 hrs	3 days
77°F	25°C	20 min	2 hrs	24 hrs	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^2	ASTM D-695
Flexural strength	9,500 psi	665 kg/cm^2	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^2	ASTM D-1002
Aluminum	2000 psi	140 kg/cm^2	ASTM D-1002
Copper	3000 psi	210 kg/cm^2	ASTM D-1002
Stainless steel	3500 psi	245 kg/cm^2	ASTM D-1002
Surface resistivity	1 x 10^{15} ohms		ASTM D-257
Volume resistivity	1 x 10^{15} ohm/cm		ASTM D-257
Dielectric constant	7.5		ASTM D-150

Chemical Resistance

Acetic acid (0-10%)	G	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.

Your Local ENECON® Fluid Flow Systems Specialist

Printed in the USA
April, 1998

Using DurAlloy™

Surface Preparation - METALCLAD DurAlloy™ should be applied only 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 and 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 ENECON® Reinforcement Tape to bridge the damaged area(s) followed by the application of additional material to completely cover the Reinforcement Tape.

Health and 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 MATERIAL SAFETY DATA SHEETS (MSDS) 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.