ENECON®

Using DuraQuartz®

The Finest Concrete Repair & Protection System Available.

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

ENECRETE® DuraQuartz® is a three component, 100% solids, concrete repair compound specifically formulated and precisely engineered to provide solutions to even the most difficult concrete repair and protection problems.

ENECRETE® DuraQuartz® is extremely versatile. It can be mixed to any consistency - from a viscous liquid to a stiff mortar. DuraQuartz® is not only for concrete; it will bond to marble, stone, slate, terrazzo, tiles...even metal!

SURFACE PREPARATION

ENECRETE® DuraQuartz® should only be applied to clean, dry, firm 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. After removing all surface and sub-surface contamination, flush the area as necessary and allow to dry completely.

4. Mix and apply DuraQuartz® Primer in accordance with the instruction sheet supplied with the material.

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.

PRIMING THE SURFACE

The colored labels on each container indicate the identity of the products.

• The YELLOW labels indicate DuraQuartz® Primer.

Only mix together the cans with the same colored labels on the container.

• Mix the Primer BASE with the YELLOW label and the Primer ACTIVATOR with the YELLOW label.

ENECRETE® DuraQuartz® Primer is supplied in each DuraQuartz® system. Pour the contents of the Primer Activator container into the Primer Base container and mix thoroughly. For your convenience, the ENECRETE® DuraQuartz® Primer Base and Primer Activator have been supplied in precisely measured quantities to simplify mixing of full units. Should a small amount of material be required, measure out 5 parts Base and 2 parts Activator by volume (5:2, v/v).

Apply the mixed Primer to the area to be coated with DuraQuartz® using a brush or a roller pressing firmly to insure thorough contact with the prepared surface. Use only enough Primer to "wet" the surface; do not flood or pool the Primer. All the Primer should be used within 20 minutes of mixing. Overcoating with DuraQuartz® should begin immediately after Priming and should be completed within two hours.

MIXING AND APPLICATION

The colored labels on each container indicate the identity of the products.

• The BLUE labels indicate DuraQuartz® Resin.

Only mix together the cans with the same colored labels on the container.

• Mix the BASE with the BLUE label and the ACTIVATOR with the BLUE label.

For your convenience, the ENECRETE® DuraQuartz® Base, Activator and Aggregate have been supplied in precisely measured quantities to simplify mixing of full units. Should a small amount of material be required, measure out 5 parts Base and 2 parts Activator by volume (5:2, v/v) and add Aggregate until the desired consistency is achieved.

To facilitate mixing of full units, a mechanical mixing device is strongly recommended. Combine the Base and Activator liquids in the large, plastic bucket and, with the mixer running, slowly add the Aggregate. Using all the Aggregate will yield a stiff, mortar-like paste; less Aggregate will result in a viscous fluid consistency.

Apply the mixed DuraQuartz® to the prepared and Primed surface using a trowel, putty knife, or other appropriate tool, pressing well to insure intimate contact and force out any air entrapped as a result of the mixing technique and/or device used.

Top coating DuraQuartz® with an ENECON® top-coat should be completed within 24 hours.

Technical Data

Volume capacity per 15 kg.	460 in^3 / 7540 cc	
Mixed density	0.072 lbs per in^3 / 2.00 gm per cc	
Coverage rate per kg. @ 0.25 mils / 6 mm	12 ft^2 / 1.1 m^2	
Shelf life	Indefinite	
Volume solids	100%	
Mixing ratio	Base	Activator
By volume	5	2
By weight	2.4	1

Working Life & Cure Times

Ambient Temperature		Working Life	Light Load	Full Mechanical	Chemical Immersion
41°F	5°C	3 hrs	3 days	7 days	10 days
59°F	15°C	90 min	6 hrs	36 hrs	7 days
77°F	25°C	60 min	4 hrs	24 hrs	4 days
86°F	30°C	30 min	3 hrs	16 hrs	3 days

Physical Properties

	Typical Values		Test Method
Compressive strength	15,500 psi	1085 kg/cm^2	ASTM C-109
Compressive modulus	640,000 psi	44,800 kg/cm^2	ASTM C-109
Compressive stress	13,000 psi	910 kg/cm^2	ASTM C-109
Flexural modulus	310,000 psi	21,700 kg/cm^2	ASTM D-790
Coefficient of Expansion	3.5x10^{-6} in/°C		ASTM D-696
Izod impact strength	0.5 ft lbs/in	0.27 j/cm	ASTM D-256
Hardness-Shore D	88		ASTM D-2240
Tensile shear adhesion Steel	1900 psi	133 kg/cm^2	ASTM D-1002
Elcometer adhesion - to cementitious and mineral type substrates is generally greater than the cohesive strength of such materials.			
Surface resistivity	1 x 10^{15} ohms		ASTM D-257
Volume resistivity	1 x 10^{15} ohm/cm		ASTM D-257
Dielectric strength	210 volts / mil		ASTM D-149
Dielectric constant	7.5		ASTM D-150

Chemical Resistance

Acetic acid (0-5%)	EX	Methyl alcohol	G
Acetone	G	Methyl ethyl ketone	G
Ammonia solution (0-10%)	EX	Nitric acid (0-10%)	G
Aviation fuel	EX	Palmitic acid	EX
Butyl alcohol	G	Phosphoric acid (0-5%)	EX
Calcium chloride	EX	Phosphoric acid (5-10%)	G
Crude oil	EX	Potassium chloride	EX
Diesel fuel	EX	Propyl alcohol	G
Ethyl alcohol	G	Sodium chloride	EX
Gasoline	EX	Sodium hydroxide	EX
Heptane	EX	Sulfuric acid (0-50%)	G
Hydrochloric acid (0-10%)	EX	Tannic acid	EX
Hydrochloric acid (10-20%)	G	Toluene	G
Kerosene	EX	Transformer oil	EX
Lactic acid (0-10%)	G	Xylene	EX

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

ENECON products are manufactured under an ISO 9001 Registered Quality Management System.

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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