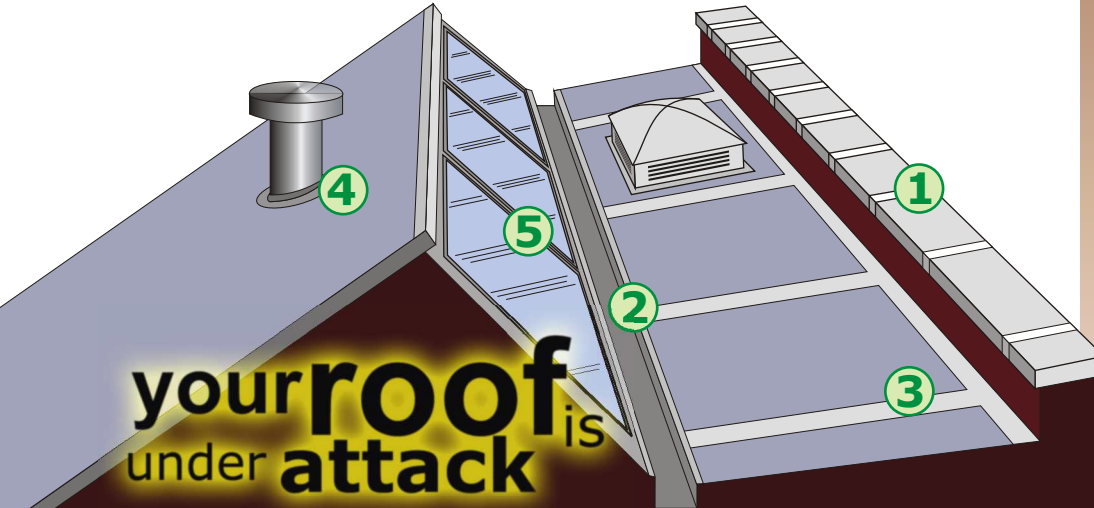


revolutionary products . . .

# ENESEAL® HR

for weather and waterproofing  
problem areas on all types of roofs...



**your roof is under attack**

UV RESISTANT · HEAT REFRACTIVE · WATER BASED  
MOISTURE RESISTANT · NON TOXIC · NON FLAMMABLE

- ① **Coping stone joints** are always problem areas and are easily sealed with ENESEAL® HR.
- ② Often underwater, **gutter joints** can be easily weather and waterproofed with the ENESEAL® HR Roof Protection System.
- ③ **Roof seams** (joining bituminous and/or cementitious materials) are thoroughly protected from leaking with ENESEAL® HR.
- ④ Why do **metal flashings** leak? Joining dissimilar materials, thermal extremes and structural movement are the main problems. The solution? Outstanding adhesion and flexibility, and long lasting dependability. All found in ENESEAL® HR.
- ⑤ **Glazing bars** have always been trouble — different thermal expansion factors of glass and metal demand a super-flexible product — and that's where ENESEAL® HR excels.

## ENVIRONMENTAL FORCES THAT DESTROY

### A durable, seamless, moisture resistant, flexible skin.

ENESEAL® HR is a single component, water based, liquid ceramic-filled membrane which cures to a durable, seamless, flexible "skin" that refracts and reflects heat while providing a moisture resistant barrier to virtually any type of surface... i.e., all types of insulation, plastics, concrete, brick, block, slate, tiles, wood, metal, bitumen, glass, tar/asphalts, etc.

ENESEAL® HR is easily applied by brush, roller or spray. Because it's water based, cleanup is quick and easy with soap and water. Completely non-toxic and non-flammable.



Sudden expansion and contraction resulting from **thermal shock** produces incredible stress on roofing - inevitably shortening its life and causing leaks.

**Winds** drive beneath unsealed areas, lifting and loosening material as well as shaking the structure, moving and twisting the roof.

An improperly sealed roof invites **water to seep in and freeze**, expanding by 25%, exerting extreme force and cracking protective surfaces.

**Atmospheric pollutants** produce highly acidic compounds which weaken cement, bitumastic materials and metal flashings.

**Heavy loads of snow** stress the roof, pushing typical roofing materials beyond their breaking point.

**Plant spores and seeds** take their toll on your roof. Roots attack structures physically and chemically and, over time, can be as damaging as any storm.

*The cost effective and commercially proven solution to all of these problems: ENESEAL® HR!*



**ENECON** Corporation  
The Fluid Flow Systems Specialists.

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## Technical Data

<b>Unit size</b>	15 liters
<b>Color</b>	White
<b>Finish</b>	Eggshell (flat)
<b>Volume Solids</b>	56%
<b>Vehicle Type</b>	Water based vinyl terpolymer matrix
<b>Shelf Life</b>	2 years (some settling may occur - mix before use). Store between 41°F/5°C and 95°F/35°C
<b>Drying Time</b>	Typically 1 hour under normal ambient conditions. Allow 24 hours before placing components/equipment back in service. Full chemical cure 21 days.
<b>Overcoating</b>	Additional coat(s) may be applied after 2 hours under normal ambient conditions.
<b>Coverage Rate</b>	35 - 40 ft <sup>2</sup> (3.3 - 3.7 m <sup>2</sup> ) per liter per coat. Coverage rates will vary depending on the type of substrate, surface porosity, texture, etc.
<b>Application Thickness</b>	6 mils dry film thickness (DFT) per coat... two coats recommended.
<b>Primer</b>	CHEMCLAD <sup>®</sup> SC (for unpainted ferrous metals)
<b>Thinning</b>	Use warm water (do not exceed 5% of total volume).
<b>Spraying</b>	Airless spray equipment producing at least 4 liters/minute (1 gallon/minute). Abrasion resistant tips... sizes .031 in./.787 mm or 0.37 in./.94 mm.
<b>Elongation</b>	230% (ASTM D 2370)
<b>Fire Retardancy</b>	Does not support combustion. Extinguishes immediately upon removal of flame (ASTM D 1360)
<b>Standing Water</b>	<b>Atlas Cell Test</b> - No blistering, debonding or water penetration after 1 month submerged and at 100% humidity.

Your Local ENECON<sup>®</sup> Fluid Flow Systems Specialist

## Using ENESEAL<sup>®</sup> HR

**Surface Preparation** - ENESEAL<sup>®</sup> HR should only be applied to clean, dry and structurally sound surfaces. Concrete, brick, block or other masonry or cementitious surfaces must be free of efflorescence. Any contaminants, such as oil, must be removed by pressure washing, steam cleaning, solvent cleaning, etc. Any existing coatings must be sound and well bonded to the substrate. Loose or flaking coatings must be removed by rotary wire brushing, abrasive blasting, grinding or other suitable means. All rust must be removed.

**Priming Unpainted Ferrous Metal Surfaces** - Prior to applying ENESEAL<sup>®</sup> HR to unpainted ferrous metal surfaces, these areas should be first primed with CHEMCLAD<sup>®</sup> SC to prevent rust bleed through the water-based ENESEAL<sup>®</sup> HR. CHEMCLAD<sup>®</sup> SC is a two-component 100% solids (solvent-free) system. After thoroughly mixing the Base & Activator, apply CHEMCLAD<sup>®</sup> SC by brush or roller to cover all exposed (unpainted) ferrous metal surfaces to which ENESEAL<sup>®</sup> HR will ultimately be applied. The working life of the mixed CHEMCLAD<sup>®</sup> SC is 70 minutes at 77°F/25°C. One coat of CHEMCLAD<sup>®</sup> SC is usually adequate. A typical coverage rate of 50 - 55 ft<sup>2</sup> (5m<sup>2</sup>) per kg. @ 6 - 7mils is recommended.

Please note: coverage will be reduced on excessively rough and/or pitted surfaces. ENESEAL<sup>®</sup> HR may be applied over the CHEMCLAD<sup>®</sup> SC when the CHEMCLAD<sup>®</sup> SC is tack-free, usually within 12 hours at about 77°F/25°C. If two coats of CHEMCLAD<sup>®</sup> SC are to be applied, the maximum overcoating time for the second coat is 24 hours at 77°F/25°C. When mixing less than full units of CHEMCLAD<sup>®</sup> SC, the mixing ratio by volume is 5 parts Base to 2 parts Activator; by weight the mixing ratio is 3.8 parts Base to 1 part Activator. CHEMCLAD<sup>®</sup> SC has an indefinite shelf life.

**Application** - ENESEAL<sup>®</sup> HR is a water based system and, therefore, must not be applied when freezing conditions exist or are expected within 24 hours of the application. Do not apply ENESEAL<sup>®</sup> HR if rain or snow is expected within 24 hours of the application.

Applications onto hot surfaces, i.e., steam pipes or ducts, must not exceed 140° F/60°C. Equipment should first be cooled prior to the application of the ENESEAL<sup>®</sup> HR. Once the ENESEAL<sup>®</sup> HR has cured for 24 hours it can withstand dry heat temperatures of up to 395° F/200° C.

Applications to newly tarred or to petroleum based materials/substrates must not be carried out until the material has fully cured - - usually 2-3 months. New concrete must be allowed to cure for at least 21 days before treating with the ENESEAL<sup>®</sup> HR system.

**Health & Safety** Every effort is made to insure that ENECON<sup>®</sup> 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 of Equipment

Wipe excess material from tools and equipment immediately. Use soap and water as needed.

**Technical Support** - The ENECON<sup>®</sup> 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<sup>®</sup> Fluid Flow Systems Specialist or the ENECON<sup>®</sup> 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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