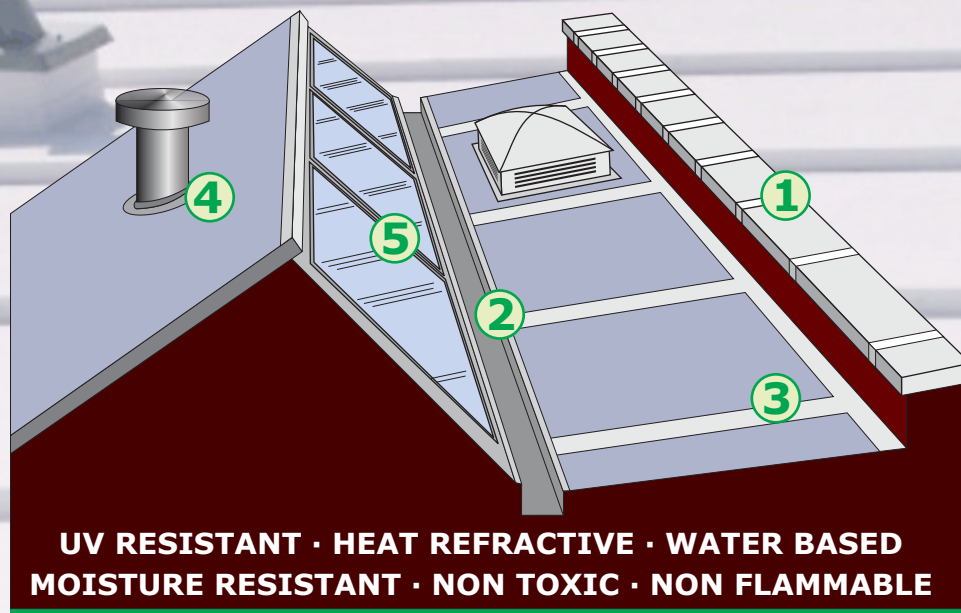


ENESEAL® HR

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



- 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

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!

A durable, seamless, moisture resistant, flexible skin.

ENESEAL® HR is a single component, water based, ceramic-filled liquid 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.



ENECON® Corporation
The Fluid Flow Systems Specialists.
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Technical Data

Unit size:	15 liters
Color:	White
Finish:	Eggshell
Volume Solids:	56%
Vehicle Type:	Water based, vinyl terpolymer matrix.
Shelf Life:	2 years (some settling may occur - mix before use). Store between 41°F/5°C and 95°F/35°C.
Drying Time:	Typically 1 hour under normal ambient conditions. Allow 24 hours before placing components / equipment back in service.
Overcoating:	Additional coat(s) may be applied after 2 hours under normal ambient conditions.
Coverage Rate:	35 - 40 ft ² (3.3 - 3.7 m ²) per liter per coat. Coverage rates will vary depending on substrate type, surface porosity, texture, etc.
Application Thickness:	6 mils dry film thickness (DFT) per coat (11 mils wet film thickness). Two coats are recommended.
Primer:	ENESEAL® CR (for unpainted ferrous metals and galvanized surfaces).
Thinning:	Use warm water (do not exceed 5% of total volume).
Spraying:	Airless spray. Minimum pressure: 2200 psi Tip orifice: 0.031 - 0.037 and 5-17.
Elongation:	300% - (ASTM D-2370)
Fire Retardancy:	Applied HR does not support combustion and extinguishes upon removal of flame. - (ASTM D-1360)
Tensile Strength:	125 psi - (ASTM D-638)
Water Vapor Transmission:	1.26 gr / hr - ft ² - (ASTM E-96)
Permeance:	2.8 perms - (ASTM E-96)
Solar Reflectance:	Initial = 0.75. After 3 years = 0.58
Thermal Emittance:	Initial = 0.91. After 3 years = 0.90
SRI:	Initial = 93. After 3 years = 69



Using ENESEAL® HR

Surface Preparation - ENESEAL® 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.

Note: If there is evidence of standing water the area should be primed with ENECLAD® SuperBond for optimal adhesion.

Priming Unpainted Ferrous Metal & Galvanized Surfaces - Prior to applying ENESEAL® HR to unpainted ferrous metal surfaces or galvanized surfaces, these areas should be first primed with ENESEAL® CR for better adhesion to the galvanizing and to prevent rust bleed through the water-based ENESEAL® HR.

ENESEAL® CR should only be applied when the temperature is above 45°F / 7°C and when the relative humidity is below 85%. Surfaces being coated should be at least 5°F / 3°C above the dew point.

ENESEAL CR should not be applied to surfaces exceeding 140°F / 60°C. Surfaces being coated should first be cooled prior to application of the ENESEAL CR.

ENESEAL® CR may be applied by brush, roller or spray. The material should be applied at a wet film thickness of approximately 12-14 mils (300-350 microns) to achieve the desired dry thickness of 7-8 mils (175-200 microns).

Application - ENESEAL® HR is a water based system and must not be applied when freezing conditions exist or are expected within 24 hours of the application. Do not apply ENESEAL® HR if rain or snow is expected within 24 hours of the application. ENESEAL® HR should only be applied when the temperature is above 45°F / 7°C and when the relative humidity is below 85%. Surfaces being coated should be at least 5°F / 3°C above the dew point.

ENESEAL HR should not be applied to surfaces exceeding 140°F / 60°C. Surfaces being coated should first be cooled prior to application of the ENESEAL HR.

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.

Cleaning of Equipment - Wipe excess material from tools and equipment immediately. Use soap and water as needed.

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.

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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