

# ENESEAL® CR

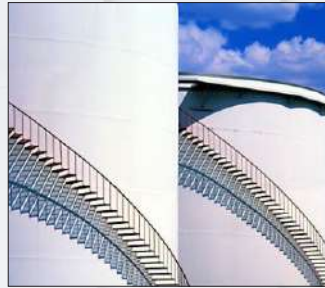
## Corrosion Resistant, Flexible Coating

- UV Resistant
- Corrosion Resistant
- Water Based
- Surface Tolerant

**ENESEAL® CR** is a 'surface tolerant' coating system that does not require abrasive blasting. It exhibits excellent adhesion to all types of ferrous metal as well as galvanized surfaces. Mechanical wire brushing, grinding or high pressure water blasting is typically acceptable to achieve good adhesion.

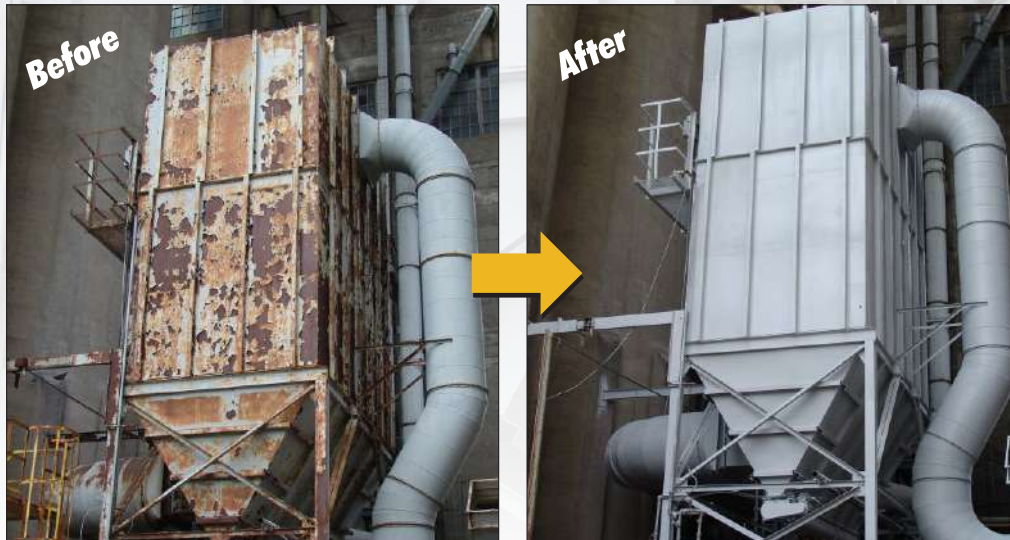
**ENESEAL® CR** is a single component, water based, liquid coating which dries to a highly durable, seamless, weather resistant, corrosion resistant, elastomeric 'skin' that provides extraordinary environmental protection to metal and concrete / masonry surfaces. It can be applied as a top coat over most zinc primers and is also available in 'safety yellow'.

**ENESEAL® CR** incorporates a unique blend of corrosion inhibitors, UV resistant resins and pigments, erosion resistant inorganic fillers and elastomeric acrylic polymers in order to provide outstanding performance in all types of demanding industrial and marine environments. Easily applied by brush, roller or spray, **ENESEAL® CR** cleans up quickly and easily with just soap and water.



### Adheres to...

- Steelwork
- Metal Roofs
- Galvanizing
- Bridges
- Tanks
- Decks
- Pipes
- Ducts
- Concrete
- Wood



**ENECON® Corporation**  
The Fluid Flow  
Systems Specialists.  
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## Technical Data

|                                    |   |
|------------------------------------|---|
| <b>Unit Size:</b>                  | 20 kg / 8 kg  |
| <b>Color:</b>                      | White, Light Gray, Green, Brown, Safety Yellow  |
| <b>Finish:</b>                     | Satin   |
| <b>Volume Solids:</b>              | 58%   |
| <b>Vehicle Type:</b>               | Water based elastomeric acrylic polymer.  |
| <b>Recommended Film Thickness:</b> | 12-14 mils WFT per coat.<br>7-8 mils DFT per coat.  |
| <b>Coverage Rate:</b>              | Approx. 500 sq. ft. per 20 kg unit per coat @ 12 mils WFT based on a smooth substrate. Rough substrates will reduce coverage. |
| <b>Shelf Life:</b>                 | 3 years in an unopened container. Do not allow to freeze.   |
| <b>Overcoating:</b>                | 4 hours minimum (16+ hours optimum)   |
| <b>Rain Resistant:</b>             | 4 hours minimum (77° F / 25° C)   |
| <b>Elongation:</b>                 | 300% (ASTM D-2370)  |
| <b>Accelerated Weathering:</b>     | 1,000 hours (12 hour cycle)<br>QUV Weather-O-Meter.<br>No changes in appearance.  |
| <b>Salt Fog Resistance:</b>        | 2,000 hours. No blistering.<br>No delamination.   |
| <b>Tape Adhesion:</b>              | 5A (ASTM D-3359 Method A)<br>Wire-brushed steel substrate.  |
| <b>Direct Tensile Adhesion:</b>    | 850 psi (ASTM D-4541) Wire-brushed steel.<br>900 psi (ASTM D-4541) Galvanized steel.  |
| <b>Water Vapor Transmission:</b>   | 1.14 g / h·m <sup>2</sup> (ASTM E-96)   |
| <b>Spraying:</b>                   | Airless spray. Minimum Pressure: 2,500 psi<br>Tip orifice: 0.013 to 0.043   |



## Using ENESEAL® CR

**Surface Preparation** - ENESEAL® CR should only be applied to clean, dry and structurally sound surfaces. Surfaces should be free of any loose material and all contaminants such as dirt, oil, grease, salt, loose or flaking paint, etc.

### ...for metal surfaces

While abrasive blasting is not necessary, all areas to be treated should be manually prepared to SSPC SP-2 or SP-3 by grinding, rotary wire brushing or other appropriate means to remove loose rust, scale, or previously applied coatings. Alternatively, high pressure water jetting in accordance with SSPC SP-12 to a minimum visual condition of WJ-4 has been found very effective on large areas to achieve the desired surface prior to application.

### ...for cementitious surfaces

High pressure water jetting or light abrasive blasting have generally been found to be the most effective means of removing loose material and the typically weak surface layer often encountered when preparing concrete / mineral substrates.

**Mixing** - ENESEAL® CR is a one component product which should be stirred slowly prior to application in order to blend in any slight separation.

Thinning of ENESEAL® CR with water or solvent is not recommended.

**Application** - 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 should only be applied when the temperature is above 45° F / 7° C and when the relative humidity is below 85%. Surfaces being treated should be at least 5° F / 3° C above the dew point.

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 film thickness of 7 - 8 mils (175 - 200 microns) per coat. A minimum of two coats are recommended for most applications.

**Cleaning 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. Please refer to the detailed SAFETY DATA SHEET (SDS) supplied with the material (also available on request) for more information.

**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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# **ENESEAL<sup>®</sup> HR**

## **The Energy Saver - and More!**

- **UV Resistant**
- **Heat Refractive**
- **Water Based**
- **Moisture Resistant**
- **Non-Toxic**
- **Non-Flammable**

### **Adheres to...**

- **Metal Decks**
  - **Roofs**
  - **Trailers**
  - **Sheds**
  - **Mobil Homes**
  - **Pre-fab Buildings**
  - **Pipes**
  - **Ducts**
  - **Tanks**
  - **Insulation**
  - **Cooling Towers**
- ...and more.**

**ENESEAL<sup>®</sup> HR** is a single component, water based, **breathable**, ceramic-filled liquid which dries to a durable, seamless, flexible "skin" that refracts and reflects heat while providing a moisture resistant barrier to virtually any type of surface... including all types of insulation, plastics, concrete, brick, block, slate, tiles, wood, metal, etc.

**ENESEAL<sup>®</sup> HR** is easily applied by brush, roller or spray. Because it's water based, cleanup is quick and easy with soap and water. It is completely non-toxic and non-flammable.



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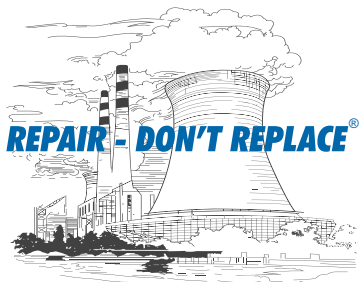
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## Technical Data

|                                  |   |
|----------------------------------|---|
| <b>Unit size:</b>                | 15 liters   |
| <b>Color:</b>                    | White   |
| <b>Finish:</b>                   | Eggshell  |
| <b>Volume Solids:</b>            | 56%   |
| <b>Vehicle Type:</b>             | Water based, elastomeric acrylic polymer.   |
| <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.                                       |
| <b>Overcoating:</b>              | Additional coat(s) may be applied after 2 hrs under normal ambient conditions. 16+ hours optimal.   |
| <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 substrate type, surface porosity, texture, etc. |
| <b>Application Thickness:</b>    | 6 mils dry film thickness (DFT) per coat (11 mils wet film thickness). Two coats are recommended.   |
| <b>Primer:</b>                   | ENESEAL® CR (for unpainted ferrous metals and galvanized surfaces).   |
| <b>Thinning:</b>                 | Use warm water (do not exceed 5% of total volume).  |
| <b>Spraying:</b>                 | Airless spray. Minimum pressure: 2200 psi<br>Tip orifice: 0.031 - 0.037 and 5-17.   |
| <b>Elongation:</b>               | 70% - (ASTM D-2370)   |
| <b>Fire Retardancy:</b>          | Applied HR does not support combustion and extinguishes upon removal of flame. - (ASTM D-1360)  |
| <b>Tensile Strength:</b>         | 125 psi - (ASTM D-638)  |
| <b>Water Vapor Transmission:</b> | 1.26 gr / hr - ft <sup>2</sup> - (ASTM E-96)  |
| <b>Permeance:</b>                | 2.8 perms - (ASTM E-96)   |
| <b>Solar Reflectance:</b>        | Initial = 0.75. After 3 years = 0.58  |
| <b>Thermal Emittance:</b>        | Initial = 0.91. After 3 years = 0.90  |
| <b>SRI:</b>                      | 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 SAFETY DATA SHEETS (SDS) supplied with the material and also available on request.

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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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