



RG-CHW® DATA & INSTALLATION



RG-CHW is a surface conversion compound utilizing mineralization technology, or the "science of Minetics." **RG-CHW** is gel compound which replaces the corrosion process by growing a mineral formation on and into the metal surface 50-200 angstroms thick. As time passes, the mineral layer on the substrate increases in thickness. **RG-CHW** is not "new" technology; it is new to the chilled water industry and is a breakthrough for controlling **corrosion under insulation (CUI)**. **RG-CHW** is a **non-drying** gel compound that is easily applied to pipes, fittings, valves, tanks and vessels. **RG-CHW's** non-skinning and non-sag properties make it a permanent solution for CUI on chilled water systems.

RG-CHW prevents corrosion and stops existing corrosion from advancing. It requires minimal surface preparation on corroded surfaces (SSPC-SP-2, Hand Tool Cleaning), which drastically reduces the overall cost of a system remediation without pipe replacement. (Integrity testing is recommended on corroded pipe)

Installation thicknesses of 25-30 MILS allows the unique formulation of the gel to heal a breach (mechanical damage) of the mineral barrier, and the **RG-CHW**® formula is **so unique**, that even if the vapor barrier is breached allowing some moisture into the system, the **RG-CHW** will buffer the moisture that migrates through the gel to an elevated pH.

RG-CHW is typically applied on the pipe using PVC chemical gloves and a patented [AccuTrowel](#) tool. The opacity and color of the product (light green) allows for easy site inspection of an installation. **RG-Cleaner** is also available from **Polyguard**; this cleaner is specifically formulated to clean tools, equipment, and hands without harmful chemicals.

Technical Information

USES:	Piping systems, valves, tanks, appurtenances, and vessels
PROTECTION:	Corrosion test - 500 hours in ASTM B117, thickness 0.025" (25 mils)
SERVICE TEMPERATURE:	Above Freezing to 130°F. This product is not designed for continuous service below freezing or above maximum temperature limit. Call Polyguard for product recommendations on systems outside this temperature range.
APPEARANCE:	Creamy, tacky, gel feel
PROPERTIES:	Viscosity – Brookfield; 300,000 - 430,000 cps (Spindle #7, 10 RPM) V.O.C. = 0.031% w/w = 0.44 g/l Specific Gravity – Gravimetric; 1.35 - 1.50 ASTM E-84-09: PASS – NFPA Class A rating
SURFACE PREP:	SSPC-SP-2 - Rusted surfaces require removal of loose scale
APPLICATION:	Glove or brush applied to tanks, vessels, and appurtenances.
COVERAGE:	64 – 53 Sq Ft per gallon @ 0.025" (25 mils) to 0.030" (30 mils)
CLEAN UP:	Material can be removed using Polyguard RG-Cleaner
SAFETY:	Protective gloves and eye protection, avoid prolonged contact with skin Slight paint-like and mild chemical odor - read MSDS prior to use
SHELF LIFE:	In container; greater than two years, Air exposed on insulation; greater than one year
ENVIRONMENTAL:	Formulated from non-toxic materials with environmental stability

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This information is based on our best knowledge, but POLYGUARD cannot guarantee the results to be obtained.



Polyguard is ISO 9001 certified since 1996.

Rusted Metal Surface Preparation

- Power Wash or wire brush, then clean the surface to remove all loose scale, grease and dirt, if it exists on the surface. A wash down agent may be required to remove chlorides from the corroded surface.
- Application can be adversely effected by wet surface conditions.
- Glove apply to surface; smooth with [AccuTrowel](#) tool, assuring coverage on pipes, crevice areas, threaded parts, or other components.
- Surface must be above freezing.

New Metal Surface Preparation

- Installation on metal surface without a coating on it is best.
- Unvarnished pipe may have a blush of red rust; don't worry about it! If there is pitting or scale, wire brush it off.
- Glove apply to surface; smooth with [AccuTrowel](#) tool, assuring coverage on pipes, crevice areas, threaded parts, or other components.
- Surface must be clean and free of oils and dust.
- Pipe surface temperature should not exceed 130°F, check with the plant safety team before installing on any hot surface above OSHA personnel protection standards.
- Surface must be above freezing.

Wet Surfaces

- **RG-CHW**[®] cannot be applied to wet surfaces, substrate must be dry.

Insulation Compatibility

- **RG** gel products are compatible with most insulation types. Elastomeric Foam insulations are not recommended unless they are in a half shell configuration (not a single split seam). Calcium Silicate or Perlite is not acceptable if the gel is not protected by a non-wicking membrane suitable for the temperatures it would be exposed to. **Polyguard** has tested specific brands of insulations for wicking properties. Call **Polyguard** if you have any questions concerning the insulation you are specifying, if we have not tested your selected brand, we welcome you to submit it for testing.

Safety

- There are no known hazards associated with the applications of the **RG-CHW** product.
- Chemical hygiene classified as an irritant.
- Hand and eye protection required – protective gloves & safety glasses.

Clean-up and Disposal

- Recommended clean-up is **Polyguard RG-Cleaner** then with dishwashing liquid and water.
- Disposal should be as a grease/oil type material.
- Use the MSDS and check with you local and state officials for proper disposal.

RG-CHW is not designed to be used systems over 130°F, or under freezing, or on aluminum substrates.

RG-CHW is not formulated to stop MIC corrosion, if MIC corrosion is present, Polyguard manufactures an MIC version of RG.

RG FAMILY OF PRODUCTS ARE PROTECTED BY NUMEROUS U.S. AND INTERNATIONAL PATENTS