



DryWired Rust Protect is a dual component product, consisting of **Rust Protect** Emulsion, a uniquely blended binding agent, and **Rust Protect** Powder, a super fine powder. **Rust Protect** has the ability to bond with metal and provide a surface coating that encases and protects old deteriorating, ferrous products. **Rust Protect** is a universal coating which can be used as a primer base coat as well as a top coat.

When used correctly, **Rust Protect** provides both the applicator and asset owner with a cost effective infrastructure maintenance program. **Rust Protect** is environmentally friendly due to its use of recycled industrial material, extremely low VOC level, and ease of application and use. **Rust Protect** has an advantage over other coatings by providing asset protection against many freeze/thaw, chemical and abrasion threats.

Uses

The primary use of **DryWired Rust Protect** is to protect and restore ferrous materials from deterioration or further loss of structure through exposure to many naturally occurring elements. **Rust Protect** also provides a unique method to bond metal substrates to concrete.

Concrete encased metal	Rebar
Metal stairs and ramps	Steel structures
Corrosion Under Insulation (CUI)	Boilers and Furnaces
Exhaust Systems	Metal Doors
Corrugated and Metal Roofs	Pipe exteriors

Rust Protect can be used in some cases as a stand-alone solution, although more often as a part of a more complex solution utilizing other **Rust Protect** products. In addition, **Rust Protect** can be used as a functional primer for other coating systems.

Properties

NVW (%)	40
pH	7.5
Visc (cps)	75
MFFT (°C)	0
Emulsion Solvent (g/L)	35
Rust Protect Solvent (g/L)	17
Elongation at break (%)	300
Koenig Hardness (s)	80

Advantages

Resistance to multiple environmental threats, including:

- Abrasion
- Freeze/Thaw
- Thermal shock
- Chemical

Application flexibility

Extreme climate resistance (-80 to +500F)

Easy to use (brush, spray, roll)

Ease of clean-up (water is the only medium)

Remarkable ease of application

Odorless

Lowers the cycle of preventative maintenance

Labor Saving

Cost effective

Uniquely flexible

Surface Preparation

Application surfaces must be structurally sound, and the overall structural integrity of the asset is critical to the overall success of any coating or overlay. Some surface damage such as deterioration, cracks and spalls can occasionally be repaired, but **DryWired Rust Protect** does not provide structural improvement or enhancement.

Rust Protect has been formulated to bond with, and penetrate into, the substrate surfaces, and even many previously applied coatings. Other materials (such as petro chemicals) which could interfere with this process, must be removed. Remove any loose, soft or contaminated materials from the area that will be repaired or resurfaced. Typical methodology may include sand blasting, degreasing, scrapping, and water blasting.

A comprehensive system will include the following program:

Remove all loose debris using a hand pump, spray on degreaser over the entire area, let sit for 5 minutes (allowing degreaser to sit for longer will NOT increase effectiveness), and then completely rinse 2 times. Let dry for 30 minutes before any further application. With extreme surface dirt or oil, you may have to apply a

second time. You must repeat this process until the substrate is free of any petro-chemical substance.

When **Rust Protect** is applied directly to a ferrous surface, the applicator will take steps to ensure minimal, if any, flash rust develops between surface preparation and product application. Proper surface preparation and maintenance is a critical variable in the success of this product.

Mixing

The ratio between **DryWired Rust Protect Powder** and **DryWired Rust Protect Emulsion** is essentially 1 to 1 for spray applications. However, trowel, brush and roll on application methods will require slightly different Mix Ratios and Application Techniques.

For all application methods, the following protocol is advised:

DryWired Rust Protect Emulsion should be first added into a clean container. **DryWired Rust Protect Powder** should then be slowly added in the appropriate ratio so the fines of the powder are not dispersed in the air. Mix 1/3 of the **DryWired Rust Protect Powder** and stir until the product looks consistent. Continue adding 1/3 of the powder and re-mixing until the entire **DryWired Rust Protect Powder** has been introduced into the Emulsion. Mix each step for at least 2-3 minutes rotating the mix so that all areas of the container are free of clumped powder and the material should look consistent. Before putting into the spray unit the material shall be sieved using a mesh screen to remove any hard particles that may foul the spray equipment.

It is recommended that the applicator sample the mix on a non-critical asset before application on the desired asset to ensure mix consistency, color and results.

For brush, trowel or roll-on applications, a mix ratio should include slightly more (10-30% depending upon conditions, substrate and desired result) **Rust Protect Powder** for each unit of **Rust Protect Emulsion**. Brush, trowel or roll-on applications on horizontal surfaces will allow for

Please note the protocol above, emulsion first then powder should always be part of the 1/3, 1/3, 1/3 process. Please note that this material can be reanimated by remixing with a minimum amount of water or emulsion.

Sieve

If the applicator is spraying DryWired Rust Protect, it should be sieved before application. This removes any particulates which might both prohibit a consistent finish and remove any particulates which may jam the applicator's spray gun. The size of the sieve should be proportional with the nozzle size of the applicator spray gun.

All spraying equipment must be cleaned. If there is any break in the spraying procedure, water should be immediately used to clean the nozzle and hose. YOUR EQUIPMENT WILL BE PERMANENTLY DAMAGED IF NOT CLEANED WITH LOTS OF FRESH, CLEAN WATER DURING ANY INTERRUPTION IN SPRAYING.

Application

DryWired Rust Protect can be applied using a sprayer, brush, trowel or roller depending upon the application tools available, substrate, volume of surface to cover, vertical or horizontal surface, hard to reach areas or unique thickness requirements. Please review the above information regarding a thoroughly cleaned substrate. A light application of water could be applied to the area in hot conditions but if sprayed it is NOT mandatory due to the effects of a high volume, low pressure sprayer (15-80psi) rebound or splash back should be minimal.

Using any application method, to avoid mud cracking, do not use too much material on a single coating. Instead, use less material on more layers, and make sure the previous layer properly dries before adding a new layer. If mud cracks develop, simply wait until the coat dries. Then re-coat the surface with a 1 to 1 ratio (emulsion to powder) and apply an additional coat. . It is recommended that applicators employ appropriate protection measures, which depending upon the application location, may include gloves, eye protection, dust masks or respirators.

Spray Application:

During the application there should be approximately 6 to 12 inches between the tip of the spray gun and the substrate – depending upon the spray equipment and substrate. Adjust the spray gun valve so the gun is spraying a 6 inch fan, using minimal pressure. A 50% overspray technique is recommended. For optimal results, a dual coat program should be applied. First spray one coat horizontally across a section, and then complete the process next with a horizontal spray direction. Do not spray at higher pressures than recommended above, as the mixture may dry before landing on the substrate. It is acceptable practice to brush hard to reach areas after spraying. Continue to agitate the **DryWired Rust Protect** solution during application. Let each coat dry completely (to touch) before applying a second coat.

Edges:

Ensure proper coverage on edges, as during normal hydrolysis induced cure, the material may become thinner than expected. Brush edges or corners before spraying the surface to ensure enough material is in contact with the substrate.

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Brush, Roller or Trowel Application:

The applicator should treat the brushing, rolling or troweling of **DryWired Rust Protect** the same as a latex paint when it comes to consistency when mixed properly. When brushing on a vertical surface, there should

be virtually no liquid running down the substrate during a horizontal pass. Brush marks may be visible after the first brush or roller pass, but after a second pass the surface will be smoother. Brushed, Rolled or troweled surfaces will not have as glossy a surface as a sprayed application. Continue to agitate the **DryWired Rust Protect** solution during application. Let each coat dry completely before applying a second coat.

Edges:

Ensure proper coverage on edges, as during normal hydrolysis induced cure, the material may become thinner than expected. Make two vertical passes on edges, and then finish with a horizontal cover to ensure proper coverage and that enough material is in contact with the substrate.

Refer to our Material Safety Data Sheet (MSDS) regarding regulatory compliance, safety, hazards, spill procedures and disposal of this product.

All statements, technical information and recommendations contained in this document are based upon tests or experience that DryWired believes are reliable. However, many factors beyond DryWired's control can affect the use and performance of a DryWired product in a particular application, including the conditions under which the product is stored or used and the time and environmental conditions in which the product is expected to perform. Since these factors are uniquely within the user's knowledge and control, it is essential that the user evaluate the DryWired product to determine whether it is fit for a particular purpose and suitable for the user's method of application. No warranty or condition, expressed or implied, is given regarding the accuracy of the statements, technical information or recommendations contained in this document. Except to the extent prohibited by law, DryWired will not be liable for any losses or damages arising in any way from the DryWired product including, without limitation, any direct, indirect, special, incidental or consequential damages, regardless of the legal theory asserted, including warranty, contract, negligence or strict liability.

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