



# DeRUST

## Rust and Patina Remover

**REMOVES RUST OFF METALS, PAINTED METALS, PLASTICS, STONE & MOST SUBSTRATES and PATINA OFF COPPER & BRASS**

### PRODUCT DESCRIPTION

**DeRUST** is a technologically advanced chemical treatment for the removal of rust, including cross-contamination rust, from metals and most surfaces, including painted surfaces. It also effectively removes patina off copper and brass. It is available in a spray-on/brush-on gel formula and dipping/immersion liquid formula. **DeRUST - Gel** easily clings to vertical and horizontal surfaces.

**DeRUST** is water-based and safe to be used on surfaces for extended / long- term dwell times without damaging the healthy metal or underlying substrate. (Always perform a test patch). It is removed by wiping, washing or pressure washing and is ready for painting, welding and use without additional cleaning or neutralizing.

### FOR USE ON

**DeRUST** is for indoor/outdoor use. It will remove rust, iron surface contamination and patina from:

- ✓ Steel and Steel Alloys
- ✓ Stainless Steel, Aluminum and most other Metals
- ✓ Painted Metals
- ✓ Concrete and some Natural Stone
- ✓ Most Plastics
- ✓ Many Marine Surfaces
- ✓ Patina from Copper and Brass

**DeRUST** is a rust (iron oxide) and patina (copper oxide) remover. It completely removes the rust and patina and will not convert it and re-attach to the non-rusted metal. (It is NOT a rust converter) The sustainable formulation has a mild acidic pH but is not corrosive and will not damage healthy metal or non-oxidized metal surfaces or most other substrates. It is an ideal replacement for muriatic/HCL acids, other strong acids or caustic-based removers.

**DeRUST** is available in two versions;

**DeRUST Gel** is applied by brush or spray application. It is used for in-situ application on vertical and horizontal applications. If left on for extended dwell time (over 12 hours) removal by pressure washing will be required. The hardened **DeRUST - Gel** forms a

protective film that can be left on for transport and storage purposes. When needed, the film is pressure-washed off and the surface is clean, rust and patina free and ready for use.

**DeRUST Liquid** is used in large dip tank and immersion applications and for systems flushing applications. It is an ideal replacement for acid baths and acid washes.

## COVERAGE

**DeRUST- Gel:** Spray On Application - 100ft<sup>2</sup> / 1US gallon (approximately)  
Brush On Application - 80ft<sup>2</sup> / 1US gallon (approximately)

**DeRUST- Liquid:** In dip/immersion tanks the product can be reused for several week or months depending on the severity of rust on each part and the number and size of parts being treated.

**DeRUST Gel and Liquid** are ready to use, DO NOT DILUTE. Do not allow product to freeze.

## ENVIRONMENTAL INFORMATION

**DeRUST** is water-based, fully biodegradable and environmentally-responsible. It is formulated in compliance with Canadian Sustainable Sourcing Principles. It reduces risks to worker health and safety when compared to other strong-acid based rust removers.

## PHYSICAL PROPERTIES

	<b>DeRUST Liquid</b>	<b>DeRUST Gel</b>
Color:	Clear	Slight yellow haze
pH:	2.0 – 3.0	2.0 – 3.0
Flash Point:	>100°C	>100°C
VOC:	None	None
Weight / Gallon	8.70	9.75
SG:	Approx. 1	Approx. 1
Application Temperature:	5°C-32°C (40°F-90°F)	5°C-26°C (40°F-80°F)

## PERSONAL PROTECTIVE EQUIPMENT (PPE)

As when working with any chemical, personal protective equipment is needed. Protect your face and exposed skins when working with any chemical. Splash goggles, face shield and gloves are recommended. Never inhale, ingest or expose skin to the product.

Refer Health & Safety Section (below) and MSDS for additional instructions.

## SURFACE PREPARATION

### **DeRUST - Gel**

The surface must be clean and dry. Remove all oils, grease, dirt, residues and any other foreign materials prior to application by brush or cleaning with soapy water or degreaser. Remove loose rust

scale prior to application using a stiff bristle brush. This will accelerate the removal / dwell time and improve the efficiency of the product. Before applying, ensure all areas not to be treated are protected from overspray and drips.

### DeRUST - Liquid

The surface must be clean and dry. Remove all oils, grease, dirt, residues and any other foreign materials prior to immersion in the dip tank. Remove loose rust scale as this will accelerate the removal / dwell time and improve the reuse ability of the product in the dip tanks.

### SITE CONDITIONS

**DeRUST** is a water-based product and should be used in temperatures between 5°C-32°C (40°F – 90°F) for the Liquid Formula and between 5°C-26°C (40°F – 80°F) for the Gel Formula.

When applying by spray or brush ensure all areas not to be treated are protected from overspray and drips. When using **DeRUST** on heritage and restoration projects this is especially important.

Protect treated areas from interference from traffic, rain and other environmental factors.

Good ventilation should be provided in confined areas.

### DWELL TIME

**Always perform a test patch / immersion to determine adequate dwell time.** When **DeRUST** is starting to remove the rust/patina, it will turn a darkish color – this is an indication that the product is activated and working.

Patina can usually be removed in shorter periods of time such as 30 minutes to a few hours.

When removing rust, dwell time are related to the severity of corrosion on the surface. The Classification Diagram below shows the various grades of rust. The required dwell time increases as the degree of rust increases. Light flash rust may take several minutes, Grade B rust may take several hours and Heavy Scab Grade may take 12 to 24 hours to complete remove the rust and scale. Heavily rusted surfaces may require 2 applications for complete removal.

Refer to SURFACE PREPARATION to ensure recommended prep prior to product application.



## APPLICATION

**DeRUST - Gel** can be applied by brush on small areas. Ensure full and liberal coverage of the affected area. For large application apply by airless industrial sprayer or HVLP equipment. **DO NOT ATOMIZE**. Use spray equipment capable of 20psig.

**DeRUST - Liquid** is designed for dip / immersion tanks. It is not designed for spray application as it has no cling-ability and will drip down vertical surfaces rather than remove rust. It may be used on horizontal applications as long as it is applied liberally enough to fully saturate / pool on surface so as to remove the rust.

## REMOVAL

**DeRUST Gel** can be wiped, washed or pressure washed off surface once desired results are achieved. Surfaces are ready to be painted or welded. Never use metal or a wire brush for removal

When **DeRUST Gel** has been left for an extended period of time and has hardened into a film (after 12-24 hours), pressure washing will be required for removal. This hardened film is useful for protection during transport or for storage purposes. When needed, the item can be pressure washed, exposing a clean, rust-free surface that is ready to be painted or welded.

Applications using **DeRUST Liquid** can be wiped, washed or pressure washed once removed from the dip tank and desired results are achieved. Surfaces are ready to be painted or welded. Never use metal or a wire brush for removal

## HANDLING & DISPOSAL

Product and wash water are fully biodegradable and can be washed away according to local water regulations. When disposing of **DeRUST - Liquid** used in large dip tanks additional disposal methods may be required, including filtration of any sediments. **ALWAYS** comply with local regulations.

**DeRUST Liquid and Gel** requires no special handling. Use standard chemical safety and precautions.

## STORAGE

**DeRUST Liquid and Gel** must be stored in upright, sealed containers in a temperature controlled environment. Extreme hot and cold temperatures should be avoided during transport and storage. **DO NOT FREEZE**. Ensure unused product is sealed to prevent spillage and evaporation.

## HEALTH & SAFETY

Do not swallow, inhale or ingest. Do not eat, drink or smoke when using this product. Ensure adequate ventilation. Avoid eye contact – wear appropriate eye goggles. Avoid skin contact – wear gloves, face shield and appropriate clothing and foot wear. Wash exposed areas thoroughly with water. If ingestion occurs seek medical advice. Refer to MSDS for additional information.

**IN COMPLIANCE WITH**

ASTM B117	Salt Spray Test
ASTM G1	Standard Practice for Preparing, Cleaning and Evaluation of Corrosion Test Specimens
ASTM A967	Standard for Testing Procedure for Surface Iron and Passivation
ASTM A380	Standard for Descaling, Pickling and Passivation of Stainless Steel

All testing was completed at an ASTM / ISO approved testing facility.