

A powerful rust removal agent which liberates rust from steel and alloys using a proprietary chelation formulation which will not damage substrates.



RAW's non-caustic formulation safely removes rust without damaging the substrate and leaves behind an almost invisible film which temporarily protects metals from re-oxidation.

NACE International estimates the annual cost of rust to industry in the U.S. alone is greater than \$276 Billion/Year. Various studies have indicated that the impact to industry ranges from 2.1% to as much as 4.5% of GNP.

RAW's Rust Remover is an exceptional product with a proven ability to remediate rust without the dangerous side-effects and costs associated with commonly used acid treatments. Rust Remover easily lifts rust off of steel, metals and concrete without damaging the surface or creating conditions which will further accelerate rust growth after its treatment. RAW's Rust Remover counters the commonly held belief that only caustic and environmentally hazardous products are able to mitigate this problem.

Additional benefits:

- Ingredients used in Rust Remover are safe and users do not require special ventilation, respirators or extraordinary personal protection equipment.
- Rust Remover can be re-used multiple times.
- Spent Rust Remover can be separated from other contaminants such as rust particles and safely disposed of as it is readily biodegradable and safe to the environment.
- Rust Remover will not harm steel or metal substrates, plastic, glass, rubber or fiberglass.
- There are no VOC's, it is non-toxic, nonhazardous, non-flammable and non – cancer forming.
- Rust Remover will also gently clean away some greases, oils or other soils during use and may also mitigate some scale, calcium and mineral build-up.

RAW Biochem Is

Readily Biodegradable
Non-Reactive
Non-Toxic
Non-Corrosive
Non-Hazardous
Not Flammable
Contain No VOC's

RAW Biochem Products Do NOT Contain

Petroleum Distillates
Glycol Ethers
Caustics
Ozone Depleting Agents
Nonylphenols
Endocrine disruptors

TECHNICAL DATA SHEET

Description

RAW's Rust Remover is a concentrated blend of readily biodegradable ingredients which revert back to their natural state when in contact with naturally occurring micro-organisms, oxygen and water.

The active ingredients are safe to use on all substrates and will not damage steel, glass, fiberglass or plastic.

Physical State

Liquid

| | |
|-----------------------------|-----------------------|
| Colour | Light Amber |
| Odour | Slight |
| pH | 3.1 – 3.4 |
| Base | Plant Extracts |
| Persistence & Degradability | Readily Biodegradable |

Directions for Use

RAW's Rust Remover is a powerful chelation agent easily able to separate rust from all metal types.

RAW products are a direct replacement for the dangerous and environmentally harmful effects associated with traditionally caustic and toxic acids used for rust removal.

Directions for Use

- Remove dirt, heavy greases, oils and heavy/flaky rust with mechanical means prior to treatment.
- Rust Remover will penetrate dirt, grease and oil but the de-rusting process will be slowed.
- Light surface rust will require 5 – 30 minutes, moderate rust up to 4 hours and heavily rusted items that have been left unprotected for years may take up to 24 hours.
- Product becomes active with water dilution.

- Dilution range is 1-part product to 5 to 25 parts water. Increased dilution extends dwell time
- Allow rust contaminated metals and other surfaces to dwell or come into constant contact with Rust Remover at all times.
- Optimum dwell time will vary depending on thickness or depth of accumulated rust.
- Repeat action if required.

Product may leave a black carbon film on surface. Film can be removed with mild detergent.

Product can be used repeatedly. 4 litres of product can remove up to .22 kg's (1/2 lb) of dry rust.

Product useful life is detected when rust removal solution appears black and no longer performs its function.

C.H.A.T.

Chemical: Unlike typical petrochemicals, RAW formulations may not perform as well with higher concentrations of product than they would with higher dilution rates. In a new process or application, trials are strongly recommended to achieve the correct chemical concentration.

HeatThe optimum temperature ranges from 43°C – 80°C. Product can be used in steam applications up to 490°C (540°F).

Agitation: Where applicable, agitation aids in dislodging soils from surfaces so they can be rinsed away.

Time: Dwell time is dependant on the application, heat and chemistry but generally speaking, longer dwell times enable more satisfactory results.