RustCheck

Rust Converter and Primer

RustCheck, when used as a primer or topcoat is proven to protect untreated, bare metal surfaces against moisture and other corrosive elements. It is suitable for use on metal surfaces on "any size" project involving Transportation, Marine, Industrial & Commercial, Farm and Home applications. "No job is too small" makes it perfect for restoring garden tools, bicycles, metal sporting & play equipment, lawn furnishings, iron railings and any other metal surface. Use **RustCheck** as a stand-alone coating or as a primer in combination with any preferred paint/coating system for unbeatable rust protection.

Rust was, is, and always will be a problem with steel. In past, the only way people or industry dealt with rust was sand blasting or using acid type products, which are both hazardous to the environment. Developed using ***Poly-Tuff Systems International*** technology there is **NOW** a safer, easier, non toxic, cost effective, productive way of dealing with rust. **RustCheck** is as safe and cleans up with (fresh water and soap). Managing rust with **RustCheck** can eliminate dangerous acid solutions and abrasive blasting. Apply **RustCheck** to preserve your metal objects and surfaces or use as a primer for your chosen coating. This process will keep structures and equipment looking like new and no measurable amount of steel is lost. As rust appears treat with **RustCheck**, let dry (cure) for 24 hours. (If needed, a **RustCheck** recoat can be applied when surface is tack free.) **RustCheck** is an easy one step application, ready to topcoat with most types of paints (water base, oil base, epoxy or urethane) after a 24 hour curing time. Once **RustCheck** has cured, it is resistant to re-rusting and most solvents. **Other products and methods of treating rust cannot say this.**

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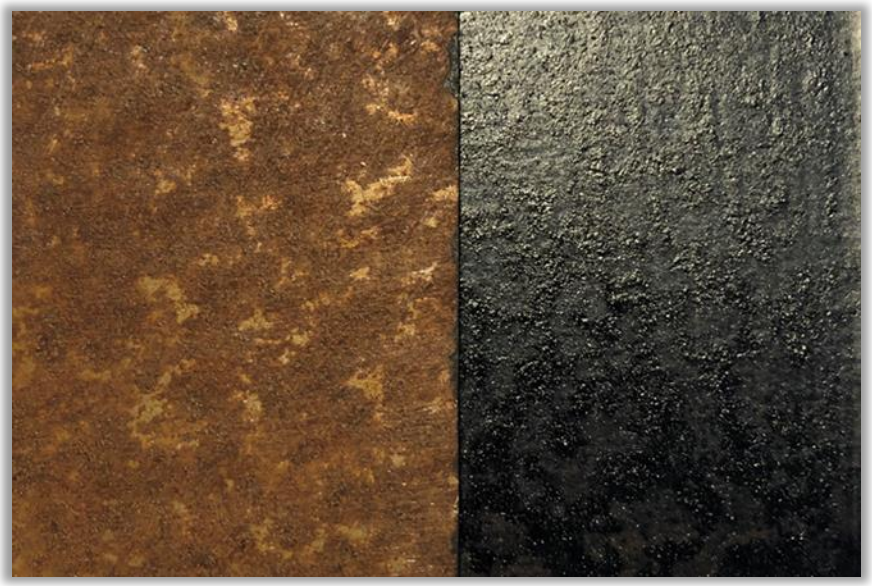

- **RustCheck** dries to a tough black, **non-removable, non-rusting magnetite**
- Proper application halts existing rust and prevents new oxidation
- Reacts with rust to create a new long lasting protected surface
- Surface can be top coated for maximum protection in harsh conditions
- Safe, no solvents, and low odors.
- Spray pump application, no aerosol
- Does not evaporate off the surface of metal
- Rarely requires reapplication
- Easy to apply
- Results are similar to sandblasting without the negatives

RustCheck is "THE" proactive way to save your steel by being safe, cost effective and productive to YOUR operations. Stop Rust at its roots before it starts!

Standard primers do **no more** than encapsulate or clad rust particles when applied to rusty steel. The rust is not being treated only **covered up**. The remaining presence of rust left on the steel will allow corrosion to continue under your topcoat or repair, causing an inferior bond or **corrosion under coating**. **RustCheck** penetrates through the rust to good steel chemically converting the rust to a tough black magnetite surface. **RustCheck** serves as a primer coat, ready for top coating. **RustCheck** has more flexibility than standard primers; this important property prevents cracking that leads to paint failure exposing your steel to the elements that cause corrosion.

RustCheck Compatibility

RustCheck is an easy one step application, ready to topcoat with most types of paints (water base, oil base, epoxy, and urethane) after 24 hour curing time. Once **RustCheck** is cured it is resistant to most all solvents. **RustCheck** is compatible with most metals such as copper, aluminum, stainless steel and will only leave a protective coating. **RustCheck** can also be used on galvanized metal – treat the rusty area (over lapping is not a concern – no reaction to galvanize) and top coat with paint or cold galvanize.

Limitations

RustCheck is not recommended for use in applications where total immersion in water or any other fluid is required, i.e., the bottom of ships, ballast tanks, or storage tanks. However, it can work as a coating with some material storage. We do not recommend **RustCheck** for these applications without first testing **RustCheck's** performance. Customers must test **RustCheck** to their application and satisfaction when subjecting **RustCheck** to constant immersion.

The Future of Abrasive Sandblasting & Priming

- No More Sandblasting
- No More Toxic Primers, Acid Penetrates or Conversion Washes
- No Mobilizations or Demobilization
- No Eye Injuries From Airborne Silica's
- No Sparks or Fire Hazards
- No Contaminated Fuel
- No Sand In Engine Intake
- No Special Safety Equipment
- No Additional Work Place Complexities (ex. sand bags, air compressors, hoses, etc.)
- No Airborne Dust Hazards To People Or Other Equipment
- Easy to Apply
- Easier to Clean Up
- Environmentally Safer for The Surrounding Area Being Treated

Sandblasting Uses Brute Force
RustCheck Uses Poly-Tuff Technology

SANDBLASTING	RUSTCHECK
· Create & implement safe action plan before project commences	· There are few restrictions and safety concerns when **RustCheck** is used
· Finding a contractor	· No specialty contractor is necessary – Most anyone can prepare and apply
· Locating & prepping of sand, rental equipment & vessel	· No special equipment is needed to prepare a clean rusty surface free of dirt & scale
· Mobilization and off load equipment, sand & personnel · Set up blasting operation · Remember no rust is processed yet · When blasting begins, all other activity in surrounding area stops	· No mobilization of special equipment or personnel is necessary
· No or little productivity is accomplished due to this process. Process takes time, labor & materials that are costly to your profits. · Once Blasting & Primer is completed, some outside activity can occur according to the Safe Plan.	· Productivity in surrounding areas continues as normal, due to minimal hazards
· CLEAN UP – Dusting, sweeping, vacuuming, bagging, disposing	· Cleanup is simple: Use water and detergent, or PSI **TuffGreen**
· Demobilization of equipment and labor	· None required
· Dispose of Used Material (EPA concerns)	· No waste, none generated, non-toxic

LABOR COMPARISON: RustCheck to Sandblasting

The number of people and training required preparing an area for a **RustCheck** application and cleanup is minimal compared to the number needed to sandblast, paint and clean that same area.

A. RustCheck – Labor/Equipment Requirements

a. Persons to clean area prior to application
b. Application tools – paint brush, roller or airless sprayer, eye protection, rubber/latex gloves, breathing protection if used in closed areas.
c. Persons to apply product
d. Persons to clean equipment after job is complete

All of the above steps can be done by same people
No additional expertise needed.

B. SAND BLASTLING – Labor/Equipment Requirement

a. Set up area- sand bags, sand pot, air compressor, hoses, filter material if machinery present (ex. Engines, electric motors, air intakes, etc...) plastic and/or tarps, crane operator.
b. Equipment - Required PPE - Special hood with fresh air hook-up, changeable lens on hood, safety glasses for when hood is removed.
c. Equipment - Required PPE - Special hood with fresh air hook-up, changeable lens on hood, safety glasses for when hood is removed.
d. Hand Protection - Gloves needed by nozzle man - help to avoid abrasion on hands. Sand under pressure flies everywhere.
e. Blast Area - Blasters and helpers (experienced if possible), hopper hand to attend sand pot while blasting, crane operator to fill hopper, paint/blaster foreman. No other work can be done in blasting area. Blasted area needs to be primed before moisture gets on blasted surface (water + raw steel = RUST) - Lost blast time equals lost productivity equals lost profits.

There are many ways **RustCheck** can be safer, cost effective and productive to your overall bottom line. Most all other plant or construction activities (production, drilling, safety checks, etc.) can be performed while **RustCheck** is being applied in the work area. With sandblasting this is **not** the case. Blasted area has many restrictions and…**RustCheck saves money, time, labor, transportation, no disposal of waste, EPA friendly and easy clean up.**

RustCheck Applications

SURFACE PREPARATION:

1. Remove loose paint and rust scales and heavy buildup with a wire brush, leaving only a rusty base.
2. IMPORTANT: Remove all oil, grease, salt, or water-soluble chemicals with PSI TuffGreen or high strength cleaner.
2. Wash with soap and water
3. Rinse well with fresh water and let dry

APPLYING RustCheck:

1. Shake **RustCheck** container thoroughly before opening.

2. Measure the estimated amount needed for the job into a clean container.
NOTE: **RustCheck** cannot be returned to the original container due to rust contamination

3. Use of rubber or latex gloves and eye protection is recommended. Contact will cause temporary skin discoloration that will have to wear off over a short period of time; it is not permanent.

4. For maximum penetration, work **RustCheck** into rusted surfaces with a synthetic bristle brush. On large areas, with a roller, pump or airless sprayer, apply **RustCheck** to rusty surface.

5. Overlaying **RustCheck** on good area (non-rusting) will not have a negative effect – only leaves a clear coating to protect good area.

6. For best results apply 2 thin coats (1 ml on each coat) within 20 to 30 minutes of each other and in a cross direction to previous coat.

7. Allow **RustCheck** to dry at least 24 hrs. before top coating. **RustCheck** dries to a black matte finish.

CLEANUP:

1. All equipment, brushes, rollers, and sprayers should be cleaned immediately after job is completed. Clean with warm, fresh water and dish soap or PSI **TuffGreen**. Once **RustCheck** has dried you are unable to remove it.

Coverage: 500 SQ. FT. per gallon 1 ml thick

What Is The Difference Between RustCheck & OSPHO (Phosphoric Acid)?

One of the most common treatments to chemically neutralize rust has been the use of phosphoric and similar acids. Although acid treatments offer an economical alternative to sandblasting, there are a number of limitations. Phosphoric acid may not completely neutralize all of the different rust formations. Acid neutralization may not be a solution because of environmental and safety considerations, as well as difficulties in field applications. After treatment, residual acid salts can cause blistering of the protective coating if not removed from the pores of steel; and, treated surface may need washing to remove acid salts**.**

RustCheck	Phosphoric Acid
1. Non-Polluting, Non-Toxic, Non-Corrosive, contains no Mineral Acids	1. Toxic, Corrosive to Skin, Eyes, Plants, Animals, Pollutes Streams.
2. Compatible with all types of Paints: *Latex, Epoxy, Acrylic, Urethanes, Etc.*	2. Must use oil primer before using a waterborne topcoat.
3. Will not diminish the structural integrity of the metal surface.	3. Will diminish the structural integrity of metal if left on for any length of time.
4. No shipping restrictions.	4. Phosphoric acid is corrosive-shipping restricted.
5. Chemically converts rust to magnetite, which is stable and non-rusting.	5. Turns rust into unstable iron phosphate compound.

ENVIRONMENTAL IMPACT

A. **RustCheck** is no more toxic than water based latex paint.

B. No toxic solvent to dispose of.

C. Dries to a neutral state – flexible black polymer ready to topcoat.

D. No by product to dispose of once job is complete.

E. **RustCheck** dramatically cuts the waste of materials and resources and significantly lowers asset replacement cost. Preventative maintenance and corrosion control is an economic necessity.

SAFETY REASONS FOR USING "RustCheck"
FOR RUST CONTROL OR RUST MANAGEMENT

1. Safer for the surrounding area being treated
2. No mobilization or demobilization
3. No eye injuries from flying sand
4. No eye injuries from flying sand
5. No sparks or fire hazards
6. No contaminated fuel
7. No sand in engine intake
8. No additional weight, ex. sand bags, air compressor and back-up
9. Hoses strung out all over etc.....

RustCheck FAQ's

What is rust: Rust is the common name for a very common compound, **iron oxide**. For iron to become iron oxide, three things are required: iron, water and oxygen. **Rust is what happens when the three get together**. Rust is simply metallurgy in reverse - meaning that it's nature's way of returning steel back to its original ore forms. Iron oxide, the chemical Fe_2O_3, is common because iron combines very readily with oxygen -- so readily, in fact, that pure iron is only rarely found in nature. Iron (or steel) rusting is an example of **corrosion** -- an electrochemical process involving an anode (a piece of metal that readily gives up electrons), an electrolyte (a liquid that helps electrons move) and a cathode (a piece of metal that readily accepts electrons). When a piece of metal corrodes, the electrolyte helps provide oxygen to the anode. As oxygen combines with the metal, electrons are liberated. When they flow through the electrolyte to the cathode, the metal of the anode disappears, swept away by the electrical flow or converted into metal cations (a positively charged ion, i.e., one that would be attracted to the cathode in electrolysis) in a form such as rust.

How does RustCheck work? The effects of **RustCheck** are created by its two principal components: A blend of organic mild acids to arrest rusting and convert rust to other compounds and a chemically advanced copolymer that bonds with both the converted rust and with applied topcoats.

What protective equipment is required with RustCheck? It's recommended that either safety glasses or goggles be worn along with chemical resistant gloves as it may cause eye or skin irritation. It is mild, but like with all chemicals (paint included), exercising caution is recommended.

Are vapors from RustCheck harmful? The vapors emitted from **RustCheck** are similar to latex paints and are not harmful, but it is recommended that it be applied only in well ventilated areas.

How do I prepare the surface for application? Good surface preparation will enable the **RustCheck** to work effectively and leads to a high quality end result. On very large area you can remove most loose and scaling material with a high pressure blast. You will want to remove large rust and scale particles with a stiff bristled brush, hammer or sandpaper. The object of this step **is** to get any loose or flaking rust off as it does not provide a stable surface. The point **is not** to remove all the rust (this defeats the purpose of **RustCheck**) as **RustCheck** chemically bonds to the rust and seals it in. **RustCheck** cannot penetrate grease or oil, so clean and degrease the surface with **Poly-Tuff EnviroClean** first, then let it dry. This step ensures that other surface contaminants will not interfere with the reaction of the **RustCheck** on the rusted surface.

How is Rust Converter applied? For best results, apply **RustCheck** with a brush or a roller. Use a brush for smaller applications and a roller for larger surfaces. It can also be sprayed with airless or pump sprayers.

How much metal area will one gallon of RustCheck cover? One gallon can cover up to 500 square feet of rusted metal. Porous, textured and irregular surfaces will require a heavier application rate.

How many coats of RustCheck should I apply? Most applications require only one coat. Applying a second coat assures complete coverage and conversion.

Can I apply RustCheck over non-rusted or painted surfaces? Yes, **RustCheck** will adhere to non-rusted or painted surfaces but it does not provide any additional rust prevention when used on these surfaces.

Should RustCheck be thinned? RustCheck should not be thinned and should be applied as it comes out of the bottle, after being properly shaken or stirred.

How long does it take RustCheck to dry? RustCheck will dry to the touch in approximately 20 minutes. Application of a second coating will ensure proper rust conversion. If possible, wait 24 hours before applying a second coat of **RustCheck**

to allow for good curing. If applying an oil-based top coat, wait 48 hours after the last coat to ensure it has proper time to cure.

Can I apply a primer coat over RustCheck? Yes, primers may be applied over **RustCheck** if a system calls for it, but is not required.

Is it necessary to paint over RustCheck? Although it's not required, aesthetically it is usually desired. If your surface is exposed to extreme elements, it is highly recommended. It will definitely extend the protective qualities of the surface from adverse weather including rain, salt mist and direct sunlight.

What type of paint or coating should I use to cover the RustCheck? RustCheck as a primer will bond with oil based paints, epoxies, urethanes, and most other top coating materials.

Can I use leftover RustCheck after I've poured it out of the bottle? No, once **RustCheck** has been exposed and used, it should not be returned to the bottle with any unused liquid.

How should I clean my application equipment after applying RustCheck? Simply use soap and water for clean-up!

Is RustCheck approved by the FDA or USDA? No, **RustCheck** shouldn't be placed in contact with foods or human water supply.

How does RustCheck need to be stored? It's best to store **RustCheck** out of direct sunlight. Do not allow to freeze and avoid temperatures above 100F.

What is the shelf life for RustCheck? RustCheck has a shelf life of 12 months.

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