FOZDAR DYNAMICS

Dr. Rust – Rust Converter

Technical Overview & Application Guide

DR. RUST Rust Converter

About Fozdar Dynamics

‘Fozdar Dynamics’ is a group of research scientists, industry experts and professionals, spanning several years of experience in the world of polymers, coatings and analytical science across multiple industries, including paints & coatings, plastics, health & beauty products, specialty chemicals & more. We provide unique solutions to a variety of industries for contract research and contract development. Throughout each step of new product development, evaluation & testing, our scientists and experts on advisory board work meticulously to ensure best quality control. We strive to exceed customer expectations.

We love challenges! We look at each problem from a fresh perspective to deliver unique customized solutions.

OVERVIEW

Dr. Rust - Rust Converter is a unique fast drying coating formulated for treatment of rusted surfaces. It stops rust instantly and prevents future rusting.

- The Rust Converter neutralizes rust and transforms it into a tough black primer that binds to the surface and provides a barrier for effective long-lasting corrosion protection. No more sandblasting, heavy scraping, or grinding.

- Rust Converter converts the rust formed from the oxidation of steel and iron into a paintable anti-corrosive layer. The cured coating is impermeable, tough and durable, preventing further corrosion. When dry, the dark grey coating acts as an effective primer for colored top-coat application and provide tenacious inter-coat adhesion.

- It's water based, with **no chlorinated, chrome containing pigments or toxic solvents** and can be used as a finish coat or can be painted over.

MECHANISM

Dr. Rust - Rust Converter acts in three ways

I. **Inactivates existing rust:** the unstable ferric hydroxide, formed at the start of the corrosion process of iron, is transformed into an inert complex, halting the corrosion process immediately.

II. **Formation of a passivating protective coating:** the formed complexes combine with the unique resin in Rust Converter creating a non-permeable coating, providing anti-corrosion protection.

III. **Functions as a corrosion inhibitive primer:** a package of corrosion inhibitive pigments and unique ion exchange technology prevents rust by sacrificial, barrier and inhibition mechanism.

FOZDAR DYNAMICS

TECHNICAL SPECIFICATIONS

Products / Specifications	Dr. RUST Standard	Dr. RUST Heavy Duty	Dr. Rust Extreme
Appearance	Off-white	Off-white	Off-white
Odor	Odorless	Odorless	Odorless
Density (g/cc)	1.2-1.4	1.1-1.3	1.2-1.4
Recommended film thickness / coat	2-3 mils	3-4 mils	4-5 mils
Recommended Number of coats	1	Minimum 2	Minimum 2
Solventborne / Waterborne	Waterborne	Waterborne	Waterborne / High solids
Corrosion resistance/Salt spray, ASTM B117, Top coated Substrate: Plain CRS	350 hours	1,000 hours	2,000 hours
pH	5.-6.5	5.-6.5	5.-6.5
Coverage @1 mil	7 m^2/Liter	7 m^2/Liter	7 m^2/Liter
Rust Conversion (minutes)	20-30 minutes	20-40 minutes	20-40 minutes
Recoat time	2 hours	2 hours	4 hours
Recommended film thickness / coat	2-3 mils	3-4 mils	4-5 mils
Recommended Number of coats	1	Minimum 2	Minimum 2
Heat resistance	Up to 150° C	Up to 200° C	Up to 200° C

DIRECTION TO USE

1. **Surface pre-treatment** The surface has to be dry, clean and free from dust, oil and grease. Remove loose rust, grease, dirt and paint residue with the aid of a wire brush, grinding discs, etc. Remove grinding dust. Clean surface.

2. Shake or stir well before using, Stir frequently during application.

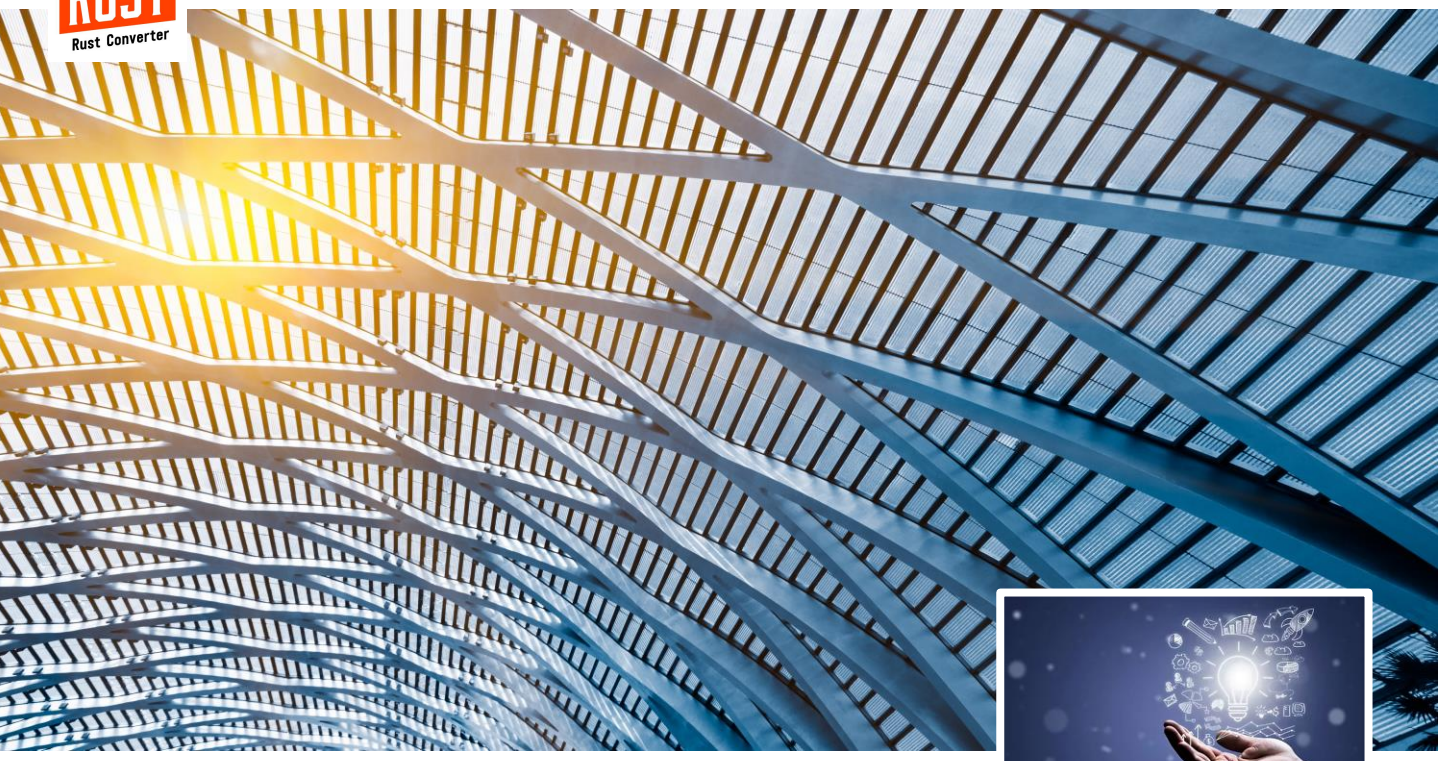
3. Apply an even coat with a standard paint brush. (dispose of brush, do not re-use).For maximum penetration apply into rusted surfaces with a synthetic bristle brush. For large areas, use a roller or sprayer.

4. Allow Rust Converter to work, results will be visible in 5 minutes. Rust conversion at room temperature is approximately 10 - 15 minutes.

5. Rust Converter will cure to a dry, dark grey finish – time dependent on application and rust. Leave for 24 hours before over-painting.

6. Use it in a well-ventilated area and keep the bottle sealed after the use.

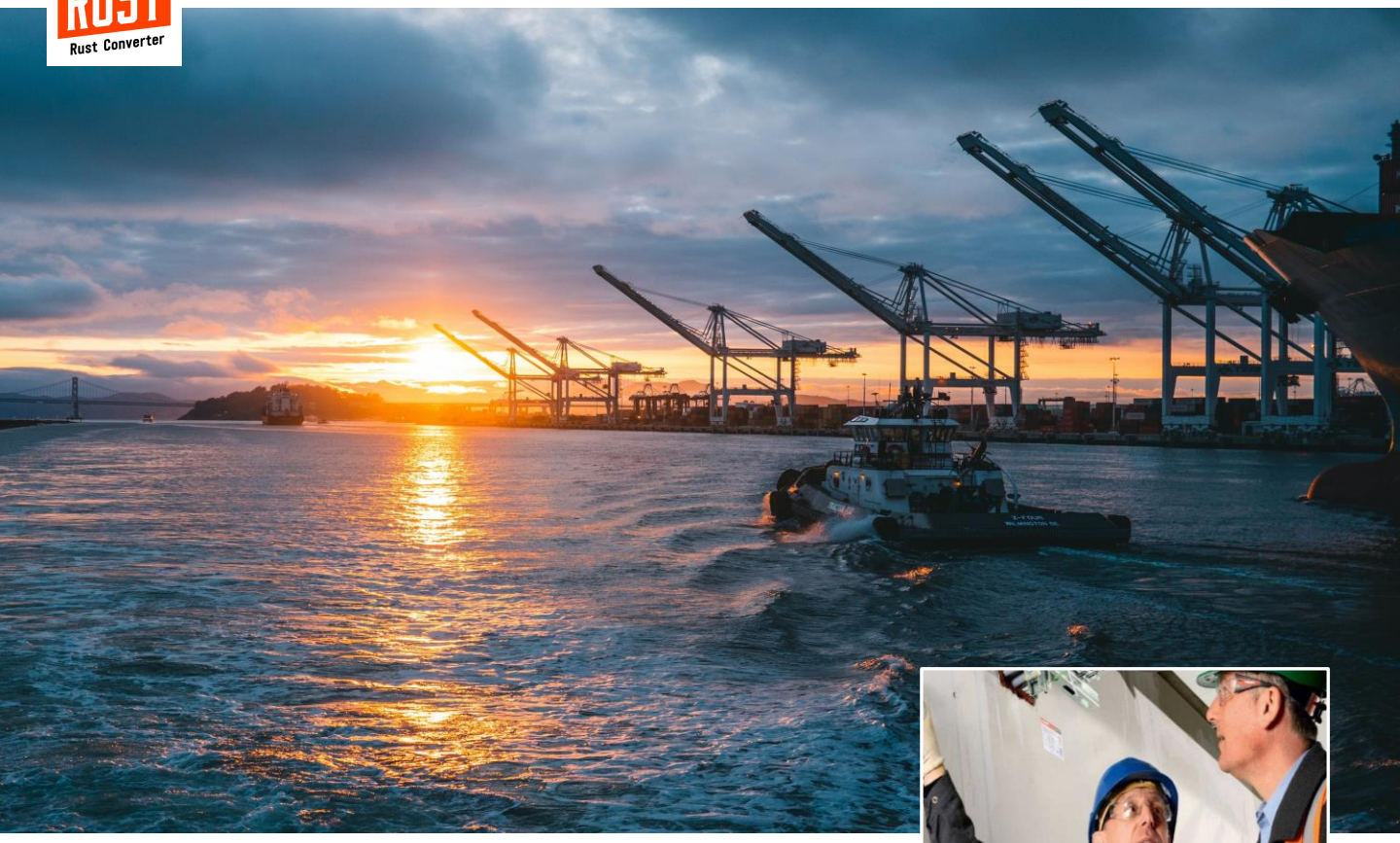
7. Use Personal Protective Equipment such as hand gloves and safety glasses during handling.



KEY – FEATURES

Some of the key features are as following

- ✓ Ready to use
- ✓ Instantly stops rust
- ✓ No more sand Blasting
- ✓ No more heavy scrapping
- ✓ No more grinding
- ✓ Fast Drying
- ✓ No clean-up
- ✓ Can be applied over a variety of metal surfaces

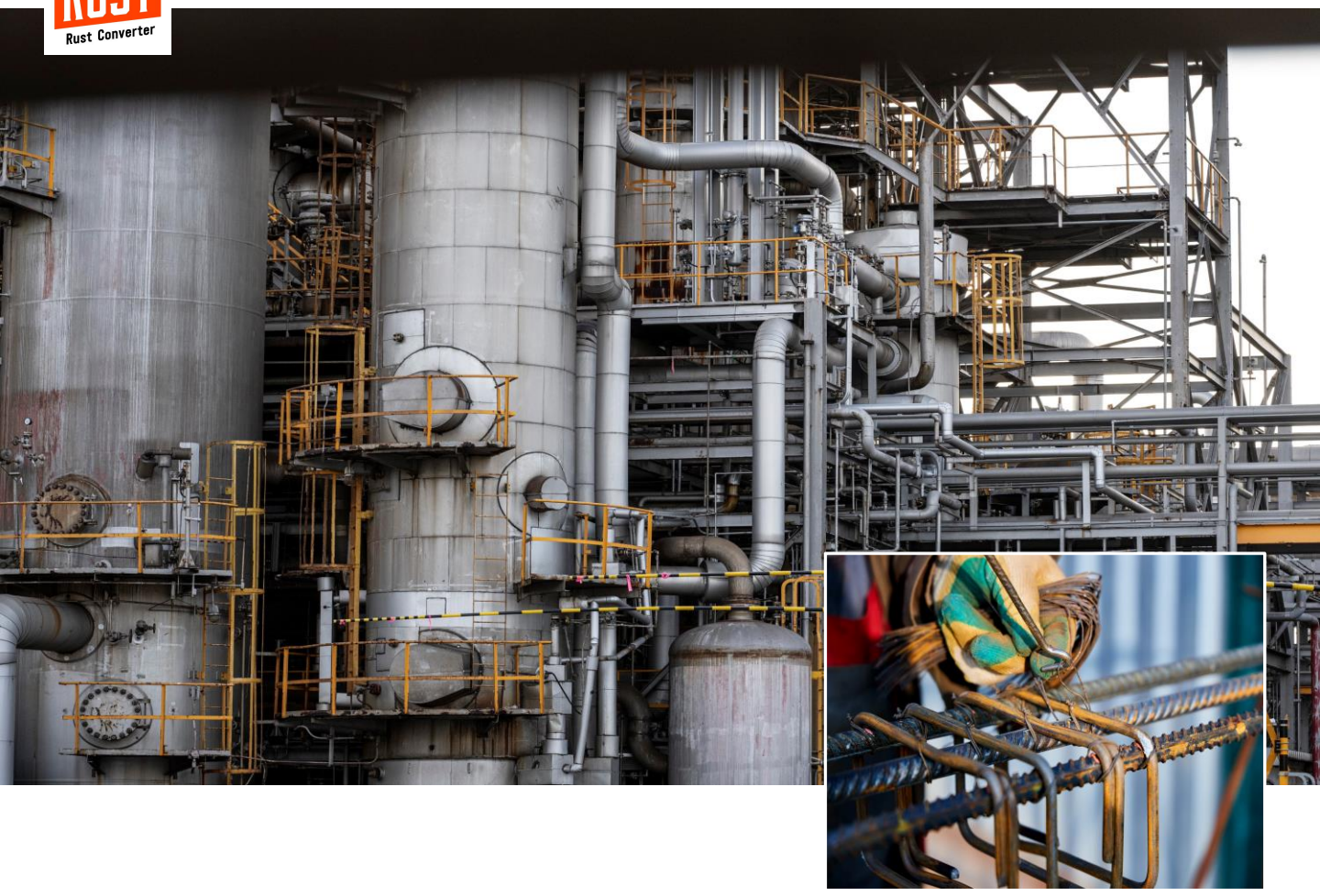


APPLICATIONS

Dr. Rust can be used on all rusted steel surfaces before painting or repainting when preparation by sandblasting is a problem. It is also used on sandblasted surfaces to prevent or passivate flash rust.

Some of the key **Application area** of Dr. Rust covered in this guide includes:

- Heavy Structural Metal/Steel tanks
- Tube and Pipelines
- Pipelines
- Automobiles



HEAVY STRUCTURED METAL/STEEL TANKS

Such kinds of tanks and structures are used to store, transfer and process chemicals. Due to direct contect with the chemical or its vapor, it can initiate corrosion on uncoated metals.

This can lead to accidents in the forthcoming periods and also can lead to heavy structural damage due to loss of structure integrity of metal due to induced corrosion.

To prevent this, a heavy duty rust Converter can be applied as a primer and the structrues can be coated with certain anti-corrosive coatings epoxy basecoats and polyurethane topcoats.

TUBES AND PIPELINE

The most common materials used in pipe manufacturing are galvanized steel, iron, copper. Pipelines suffer from a number of corrosion forms, some more common than others. They range from **pitting corrosion** to **uniform corrosion**, **galvanic corrosion**, **crevice corrosion** and **microbiologically influenced corrosion** to name a few. Corrosion can also develop in non-metallic pipes such as plastic or even carbon fiber due to induces mechanical stresses.

This corrosion leads to damage of the pipeline and hence resulting in the splliage or liquids/vapors getting transferred through it, leading to both life hazard and economical losses.

Such pipelines can be protected from corrosion without using any type of sand blasting technique as sand blasting leads to loss of metal hence decrease the structural regulatiry and strength of the pipeline.

AUTOMOBILES

The metallic body of any automobile and exposed automotive parts are susceptible to corrosion due to delamination of coatings, rain, road salts, exhaust fumes of other vehicles Additionally, the road-facing side of the car turns into one big sandblasting cabinet at highway speeds, and due to impact of gravels and stone chips at high speeds coatings wear off over time.

When any metal surface of an automobile comes into contact with air **containing some moisture**, atmospheric corrosion can occur. A thin (micron-scale) film of moisture deposited under nonzero humidity conditions is sufficient to cause the gradual decay of iron and steel surfaces, producing iron oxide, or rust.

Rust Converter can be used a primer on the metal surfaces. It forms a rubust layer and instantly stops corrosion. Desired coats can be applied further on the primer surface.

DR. RUST
Rust Converter

Request a sample today!

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