Technical Data Sheet

NanoTech Innovation Inc.

3-in-1 Rust Converter, Primer & Sealer

PRODUCT DESCRIPTION

NanoTech innovation 3-in-1 Rust Converter, Primer and Sealer is a unique fast drying rust converter that is applied directly on rusty areas, with no or minimal surface preparation to transform the existing rust into a durable anti-corrosion coating and a paintable surface. No more abrasive blasting, heavy scraping, or grinding is needed.

- **No more abrasive blasting.** Simply remove loose rust and then apply the product.
- **Prevents Future Rusting.** Seals out moisture and other outside elements.
- **Fast Drying.** Second coat can be applied in 45 to 60 minutes.
- **Excellent Primer.** Treated surfaces can be painted over with most paints.

STORAGE

The products should be kept in a cool and well-ventilated place protected from heat and direct sunlight. Containers must be kept tightly closed. Handle with care. Storage Temperature: 5 – 35°C and Relative Humidity: RH: 0 – 85%.

COMPLIANCE AND TESTS

Properties	Standards	Test Results
Density	ASTM D1475	1.32-1.38 g/cm³
Solid Content	ASTM D2369	65.6% -72.5%
pH Value	Digital pH meter	6-7
Wet Film Thickness	ASTM D4414	157-180 µm
Dry Film Thickness	ASTM D7091	102-130 µm
Water Resistance	ASTM D870	30 days, no abnormalities
Salt Immersion	ASTM G80	30 days, no abnormalities
Salt spray	ASTM B-117	300 hrs
Corrosion Under Insulation (CUI)	ASTM G189	Passed - No abnormalities
Pull-Off Adhesion Strength	ASTM D4541	1400–1500 psi (9.7–10.3 MPa)
Hardness	ASTM D3363	HB–2H
Environmental	IEC 60068-2-78	60 days no abnormalities
Anchor Pull-Out Strength	ASTM E488	Passed
Cross-Cut Adhesion Test	ASTM D3359	5A (no peeling or removal)

PRODUCT CHARACTERISTICS

Solution Colour	Brown
Coating Colour (after reaction)	Black Semi-Gloss
Temperature resistance (after curing)	-50 to +180 °C (-58 to 356 °F)
Shelf Life	12 months
Surface Coverage	
RustAct™	8-10 m²/L (325-407 sq ft/gal)
AnarPrime™	8-10 m²/L (325-407 sq ft/gal)
AnarPrime™ Ultra	5-7 m²/L (250-300 sq ft/gal)
Finish	Medium Sheen

DRYING SCHEDULE

6.0 mils wet (150 microns)	@ 40°F/5°C (50% RH)	@ 77°F/25°C (50% RH)	@ 120°F/49°C (50% RH)
To touch	4 hours	1 hour	15 mins
To recoat minimum	6 hours	2 hours	1 hour
To recoat maximum	1 day	1 day	1 day
To topcoat maximum	3 days	3 days	3 days
Pot Life (open container)	N/A	N/A	N/A
Sweat-in-Time	None required		

Drying time is temperature, humidity, and film thickness dependent.

APPLICATION CONDITION

Temperature:	40°F (5°C) minimum, 167°F (75°C) maximum (air, surface, and material) At least 5°F (2.8°C) above dew point
Relative humidity:	85% maximum

Refer to product Application Bulletin for detailed application information.

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DESCRIPTION TO USE

Preparation



Remove loose rust flakes, dirt, and debris from the rusty surface. If there are any thick rust scales or heavy unstable rust present, use a wire brush or sandpaper to remove them (SSPC-SP3).

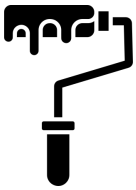
Only conversion of firmly bonded rust will result in durable protection. Oil, grease, unstable old paint, mill scale, form oil, fingerprints and water-soluble surfaces and chlorides must be removed to allow the product react with rust. It is recommended to pressure wash before application.

Mixing



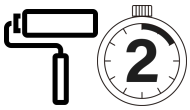
Thorough mixing is required prior to application. Use paint mixing disc/dispersion impeller. Insert the disc to within 1–2 inches of the bottom of the container. Mix the coating for 5–10 minutes at a speed sufficient to create a gentle vortex, while avoiding air entrainment. Since the product thickens during storage, ensure that any settled material along the side walls and bottom of the container is fully reincorporated during mixing. Re-mix regularly prior to use to maintain consistency.

Application



Apply product directly to the rusted surface using a brush, roller or sprayer. Ensure even coverage, and avoid excessive application to prevent drips or runs. Product will start to react with the rust and turn into a black or dark-coloured coating. Allow the coating to touch dry completely. The complete hard drying of the coating typically takes about 8 hours, but it may vary depending on temperature and humidity. Two coats of the product are recommended.

Post-application



Allow 24 hours for the product to fully cure before applying the middle coat and/or final coat. For long-lasting protection, seal the cured rust converter coating with an epoxy middle coat and one coat of a high-quality exterior top coat. No other primer is required.

USE CASES

For use as a primer over corroded steel or iron-based metal structures:

- Structural steel (columns, beams, rebars)
- Staircases and access platforms, ladders and safety cages
- Metal roofs and canopies
- Handrails, guardrails, fencing and gates
- Industrial equipment frames and housings
- HVAC covers and rooftop mechanical units
- Municipal infrastructure (bridges and overpasses, light poles, signage structures, railings)
- Utility poles and transmission structures
- Marine infrastructure
- Agricultural equipment and metal structures
- Oil & Gas equipment and assets (storage tanks, pipelines and pipe racks, flanges, valves, fasteners, bolts, etc.)
- Trailers and utility frames
- Vehicle parts and chassis
- Military infrastructure and defense assets

APPLICATION EQUIPMENT

Airless Spray

- Pressure.....minimum 3000 psi
- Hose.....minimum 1/4" ID
- Tip.....minimum 0.019" Orifice
- Filter.....no mesh

Conventional Spray

- Gun.....Binks 95 or similar
- Tip.....66 or bigger
- Cap.....63 PB
- Atomization Pressure.....50 psi
- Fluid Pressure .....10 psi

Brush

Brush.....Natural Bristle

Roller

Cover.....minimum 1/2"

If specific application equipment is not listed above, equivalent equipment may be substituted.

CLEAN UP INSTRUCTION

Use water only. Clean equipment within 15 minutes of coating completion.

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RECOMMENDED TOP-COATS

The Product is compatible with most of the top-coats including but not limited to acrylic, polyurethane, epoxy and alkyd paints.

SAFETY PRECAUTIONS

Please refer to the SDS sheet before use. Published technical data and instructions are subject to change without notice. Contact NanoTech Innovation representative for additional technical data and instructions.

WARRANTY

NanoTech Innovation Inc. warrants that its products are free from manufacturing defects at the time of delivery.

Any additional product or service warranties may be discussed and agreed upon in writing on a project-by-project basis.

DISCLAIMER

The information and recommendations set forth in this Product Data Sheet are based upon tests conducted by or on behalf of The Nanotech Innovation Inc. Such information and recommendations set forth herein are subject to change and pertain to the product offered at the time of publication. Consult your Nanotech Innovation Inc. representative, agent or distributor to obtain the most recent Product Data Information and Application Bulletin.

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Technical Consultation Service

Our Technical Staff is ready to assist you with any questions. You are invited to take advantage of our extensive experience, and trained field service representatives. Hours of operation are Monday through Friday 9:00 am until 5:00 pm PST.

PRODUCTS



RustAct™



AnarPrime™



AnarPrime Ultra™

ORDERING INFORMATION

Packaging:

RustAct™	**Can**	**8.5 Fluid ounce or 250 ml**
RustAct™	**Can**	**1 Quart or 946 ml**
RustAct™	**Can**	**1 Gallon or 3.78 L**
AnarPrime™	**Pail**	**5 Gallons or 18.9 L**
AnarPrime Ultra™	**Pail**	**5 Gallons or 18.9 L**

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