

S-2100 Rust Buster™

TECHNICAL DATA SHEET

DESCRIPTION

S-2100 Rust Buster™ is a VOC compliant copolymer metal primer that converts rust into a barrier layer of Magnetite, a non-rusting inert substance. This primer acts as a bonding agent for epoxy, oil-based enamel and urethane topcoats.

USES

Partially Rusted Steel Surfaces
Aluminum / Copper / Brass
Decks & Deck Railings
Rebar

Structural Steel
Pipes
Bridges

ADVANTAGES

S-2100 Rust Buster bonds with all major topcoats and does not leave any white streaks when used. Rust Buster is easy and safe to apply. It is non-toxic, environmentally friendly and VOC compliant.

SURFACE PREPARATION

Remove all salt, loose rust, mill scale, dirt, grease, oil, old paint and other deposits. Apply solvent cleaner according to manufacturer's directions and rinse. A residue-free surface is essential before coating application begins. The surface should be a clean, tight rust.

Note: Do NOT use acetone or dishwashing detergent to clean rusted steel surface. When black color appears, rust conversion has started. If gray areas appear, apply more product.



APPLICATION

Prior to use, remove heavy grease, wax, soot and oil deposits. Wire-brush all the rust and remove any loose rust, plate rust, mill scale, and flakey paint. A high-pressure water blast is best for removing old paint. Use a water-based, rust and pain cleaner in the blast water to remove all oil films and chemicals. After the water blast, insure the surface is dry before applying S-2100 Rust Buster. Stir product until creamy white and uniform in color. Brush roll or spray undiluted product into a heavy, white coat with no surface show-through at 8-10 mils wet film thickness. When black color appears, rust is converting and has begun the process. At the green/blue stage, continue brushing for 2 minutes or more and allow to dry for chemical reaction.

Conditions and Limitations

Keep from freezing. Apply at 55 degrees and rising and below 7-37 Celsius and falling. Test over zinc-based coatings as some galvanizing reject S-2100 Rust Buster chemistry. Do not apply onto zinc chromate or phosphates, lead, magnesium, copper powder, graphite or borate pigments. Chromate-treated (pickled) prefabricated steel building cold rolled perlin and gutters are to remain dry until top-coated. Cold rolled steel can require abrading to anchor profile and degrease. Waterborne topcoats subject to tannin staining must be tested 48-60 hours before use. If tannin staining occurs, apply oil-based or apply oil-based topcoat. Always prepare a test patch to ensure compatibility with substrate and follow-on coatings.

VISUAL INSPECTION

The correct final appearance is a purple to black surface over rusted areas, and a clear film over old paint. A white topcoat applied after a 24 hour cure will show no bleeding.

Insufficient Application

A gray color indicates need for more S-2100 Rust Buster to be applied while surface is still tacky.

Improper Application

Brown streaks are an indicator of incomplete conversion due to wet surface or thinned product. Remove S-2100 Rust Buster, re-clean the area, and re-apply S-2100 Rust Buster.

Improper Surface Preparation

A speckled discoloration indicates mineral salts or other chemical contamination. Remove all S-2100 Rust Buster, re-clean the area, and re-apply S-2100 Rust Buster.

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FREQUENTLY ASKED QUESTIONS

Rust converters chemically treat the rust - converting it into an inert compound - which then acts as a barrier layer against future rusting. Therefore when using a rust converter, especially S-2100 Rust Buster, you are adding a double layer of protection against future rusting before you even topcoat. Rust encapsulators & inhibitors encase existing surface rust, cutting off the oxygen supply that keeps that rust from growing. However, the existing rust is still there lurking under the encapsulating film, ready to continue growing upon any surface damage to the paint film or film failure. Acids used for treating rust are by nature corrosive, and any unreacted acid residue will remain on the surface. This residue frequently interferes with the proper bonding of topcoats and can cause accelerated chalking. Acids, such as phosphoric acid, do work well to remove rust stains from painted surfaces, but are not as effective as rust converters on a rusted surface.

Does S-2100 Rust Buster convert rust?

Yes, S-2100 Rust Buster is a water-based rust converter combined with an unpigmented, high-quality, copolymer, latex, metal primer. The advantages of using Rust Buster include reduced labor costs by not having to mechanically or chemically remove existing rust while at sea, on bridges, or in operational factories; and the environmentally friendly properties of the product makes delivery, storage, use, cleanup and disposal relatively convenient when compared to other metal primers and rust removal methods. Rust Buster is non-flammable, non-corrosive, easy to apply, and cleans up with just soap and water.

Does S-2100 Rust Buster protect my surfaces?

Yes, S-2100 Rust Buster converter chemistry is a proprietary technology, based on very mild acids, combined with an unpigmented, improved metal primer, a copolymer created from styrene butadiene (latex) chemistry. S-2100 Rust Buster is designed to apply directly to clean tight rust. The first bloom of rust after water blasting is a benefit. The effects of Rust Buster are created by its two principal components:

- Mild acids to arrest rusting and convert existing rust to other compounds
- A chemically advanced copolymer that bonds with both the converted rust and with applied topcoats.

Can S-2100 Rust Buster be painted over?

Yes, S-2100 Rust Buster remains "open" to mechanical, chemical and electrical bonding with most topcoats for 30 days. S-2100 Rust Buster is well known as a high quality and consistent product by those who routinely deal with the coating of rusted metal.

Coverage Rate

200 sf / gallon at 2.5 mil dry film thickness.
4.9 square meters per liter.

**For estimating purposes only. The actual surface condition and thickness of rust will dictate the amount of Rust Buster needed.*

Spreading Rate

8-10 mils wet film thickness, 200-250 microns, to create optimum dry film thickness of 2.5 mils to 3.5 mils DFT (65 to 90 microns) to cover anchor profile.

Drying Time

(ASTM D 1640)
(3 mils wet film - 76 microns)
Set to touch 3 minutes
Cotton free 10 minutes
Dry to touch 30 minutes
Hard dry 40 minutes
Very hard dry 60 minutes

Recoat Time

77°F, 25°C
Brush/Roller 15-30 minutes
Spray 10-20 minutes or between set to tough and dry to touch (tacky).

pH

3.0

Flash Point

(Closed Cup ASTM D 56)
> 200°F > 93°C

Heat Resistance

Resists heat and aging up to 270°F

Rejects Rainwater

77°F, 25°C
No wash off 240 minutes

Packaging

1 gallon containers
5 gallon pails with pour spout
1 quart with handle
52 gallon fiber drum

Appearance

Milky, off-white to tan liquid

Odor

Very Mild

Thinning

Do not thin.

Clean Up

Soap and water for equipment, hands, clothes. Clean dried spatter with lacquer thinner.



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VOC (ASTM D 3960)	60 grams per Liter 8 oz. per gallon	Shelf Life	12 months when properly stored.
Non-volatiles by Volume	31%	Storage	(ASTM D 1849) Resists greater than 1 week at 140°F and up to or over one year between 38°F and 105°F, 3°C and 41°C. Avoid continuous direct sunlight. Keep from freezing, discard if frozen.
Non-volatiles by Weight	35%	CAUTION	Do not use in direct contact with food or potable water. Keep away from children. Do not take internally. Always use safety gloves, appropriate eye protection, and appropriate OSHA/NIOSH approved respirator in areas with poor ventilation and when exposed to spray mist both indoors and outdoors. If ingested, seek medical attention immediately.
Weight per Gallon	8.6 lbs. (3.91 Kg.)		
Recommended Topcoat Time	After 24 hours minimum, up to 30 days.		
Cathodic Disbondment	Rust Buster to rusted steel and topcoated with – ASTM D4541 Wasser MoistureCure-CR-PW Average Pull Force at Failure 1128 psi.		

LIMITATIONS:

Super-Krete Products are to be applied only when surface temperatures are above 55°F and rising and not to exceed 100°F. Super-Krete Products are not to be applied when precipitation is expected within 24 hours following completion of application. Do not allow materials to freeze. Each Super-Krete product acts as an inherent part of a proven system. Super-Krete Products are professional, contractor grade products. Training in the use of these products is available. Consult a Super-Krete Products representative for information and assistance locating approved contractors in your area or for training class dates.

MOISTURE VAPOR EMISSIONS PRECAUTIONS:

All concrete floors not poured over an effective moisture vapor retarder are subject to possible moisture vapor transmission that may lead to blistering and failure of the coating system. It is the coating applicator's responsibility to conduct calcium chloride testing in compliance with ASTM F1869, or relative humidity probe testing in compliance with ASTM-F2170, to determine if excessive levels of vapor emissions are present before applying any coatings. Arizona Polymer Flooring offers **S-1300 Pene-Krete®** for cementitious overlay products and **VaporSolve® Moisture Remediation** systems for resinous floor coatings. Consult our technical service department. Arizona Polymer Flooring and its sales agents will not be responsible for coating failures due to undetected moisture vapor emissions.

WARRANTY:

Arizona Polymer Flooring guarantees that this product is free from manufacturing defects and complies with our published specifications. In the event that the buyer proves that the goods received do not conform to these specifications or were defectively manufactured, the buyer's remedies shall be limited to either the return of the goods and repayment of the purchase price or replacement of the defective material at the option of the seller. ARIZONA POLYMER FLOORING MAKES NO OTHER WARRANTY, EXPRESSED OR IMPLIED, AND ALL WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED. Arizona Polymer Flooring shall not be liable for damages caused by application of its products over concrete with excessive moisture vapor transmission or alkalinity. Arizona Polymer Flooring shall not be liable for any injury incurred in a slip and fall accident. Manufacturer or seller shall not be liable for prospective profits or consequential damages resulting from the use of this product.

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