

Moisture-Cure Type Strong Rust Preventive Primer!!

# Knockdown Rust Locker

Nanotechnology helps it penetrate deeply into rust!  
Strong adhesion power locks rust!

One-component strong penetrating rust preventive primer. It retards rust by penetrating deep into the source of the rust locking it. When Knockdown Rust Locker (abbreviated as KRL) is applied on painted substrates without rust, it hardens the substrate and improves resistance to solvents so that it can help the coating film to be hard to lift off. KRL is easy to use, can be applied on most substrates, both rusted and without rust.



Behind left : 16 L, Behind right : 3.7 L  
Front left : 0.3 L, Front right : 0.9 L

**Color** Light brown (nearly transparent) **Objective** Rust preventive primer

**Applications** Emergency staircase at condominium, Vessel related (container etc.)

### Features

1. Super rust preventive power. It penetrates deep into the source of the rust and locks it.
2. Top coating can be applied in a short period of time (2-3 hours, contingent upon a kind of top coating applied) after KRL is coated.
3. Putty can be applied directly over it with strong adhesion.
4. No water washing is required.
5. It can be applied on existing finish.
6. KRL will harden the coating film which is easy to lift off and make it more resistant to solvents.
7. It can be applied as rust preventive after semi-automatic or arch welding.

### Cautions

- When humidity is high (approximately 80%), condensation may form on the substrate. In this case, it is recommended KBL should be applied after wiping the substrate with a clean cloth.
- When applying on substrates coated with lacquer and synthetic paints, KRL may disturb the paint. Leave it as is for over 3 hours under normal conditions (20°C and 60% humidity). Then the substrate will be hardened for increased resistance to solvents.
- Keep the container in the dark and cool space.
- Please call us first if you use epoxy resin related paints as top coat.
- A topcoat with a slow curing rate may cause bleeding. In this case, it is recommended top coat should be applied more than two times. Be sure that drying time between coats is adequate.
- Over time, KRL may yellow when exposed to sunlight. Avoid using KRL under paints with high transparency such as clear lacquer.

### DIRECTIONS for use

1. Remove loose rust with a wire brush (treatment SSPC-SP-3).
2. Sand and feather-edge rusted areas with P120. Remove dust with air blower.
3. Shake KRL well. Pour the amount to use into another can or spray gun. Apply a thin coat. Clean brush or spray gun with lacquer thinner. Dispose of left over KRL in accordance with local regulations. DO NOT return left over KRL into its original container.
4. When putty is applied, allow 30 to 40 minutes to cure at room temperature (20°C and 60% humidity). Then, apply it while the surface is still tacky.
  - \* When the substrate is completely hardened, then sand substrate before applying top coat. Apply top coats.
  - \* When the substrate remained slime, apply top coating after wiping it with a clean cloth.

## Why is KRL the best and most effective solution to rust problems?

"Knockdown Rust Locker" is able to harden rust. KRL offers completely different rust preventive system compared to conventional rust preventive paints. KRL penetrates deep into the source of the rust and converts the rust into a strong non-rust binder. Consequently, it can not only cover the surface as the conventional does, but it can also retard metal erosion as much as zero inside of the rust. Moreover, KRL is also a primer which can offers more excellent rust preventive power by using topcoats.

## ■ Proper Substrate

Substrate	Suitability
Steel plate	◎
Stainless steel(SUS 304)	◎
Aluminum (A1050)	◎
Chemical conversion coated film(Bonde)	◎
Zinc plated steel plate	◎ ※ 1
Baking finish film	◎
Hot-dipped galvanized steel	○ ※ 1

Notes : ※1 One coat without sanding.  
※2 Can be applied to welding area of steel structure.

## ■ Rust Preventive Performance Comparison

		Knockdown Rust Locker	2-component Epoxy	Rust Conversion
Surface treatment	Rust	<b>Over SSPC-SP-3</b>	Over SSPC-SP-2	Over SSPC-SP-3
	Existing finish	<b>Not needed to be removed</b>	Needed to be removed	Needed to be removed
	Steel	<b>Effective rust preventive</b>	Needed	Not needed
	Welded	<b>Effective rust preventive</b>	Needed	Not needed
Performance		<b>Brush, Roller, Spray Gun</b>	Brush, Roller, Spray Gun	Brush, Roller
Drying time through top coat		<b>3 hours at 20°C, 60% humidity</b>	Over 1 day	1 day
Treatment prior to top coat		<b>Not needed</b>	Not needed	Water washing or sanding
Standard application amount		<b>50 ~ 100g/㎡</b>	Over 200g/㎡	100g ~ 150g/㎡
Workability		<b>Easy handling of 1 component</b>	2-component	Water washing or sanding after coating
		<b>Applied on most substrate</b>	Mainly applied on unrusted side	Applied on only rusted area

## ■ Proper Topcoats

Topcoat	Compatibility
2-component acrylic urethane paint (strong solvent)	◎
2-component acrylic urethane paint (mild solvent)	◎
1-component urethane paint	◎
Acrylic lacquer	◎
2-component epoxy paint ※ 1	◎
Phthalic acid based enamel paint	○
Synthetic paint	○
Water-based paint ※ 2	○

Notes : ※1 Call us first before using.  
※2 Sand and coat after "Knockdown Rust Locker" is completely cured.

## ■ Test Data for Coating Film

Item	Test method	Result
Adhesiveness	1mmx1mm gridiron cellulose tape test	100/100
Accelerated weathering	Sunshine weathering meter for 2,000 hours	OK
Water resistance	20°C tap water 240 hours	OK
Salt water resistance	5% sodium chloride at 35°C for 120 hours	OK
Acid resistance	20% nitric acid at 20°C for 10 hours	OK
Alkali resistance	20% sodium hydroxide at 20°C for 10 hours	OK
Solvent resistance	Lacquer thinner rubbing 40 times	OK

Notes : Substrate : SECC (sanded steel plate) 1.2 x 100 x 150 m/m  
Painting process : ① Sand the surface with P120 after removing contaminants.  
② Apply "Knockdown Rust Locker"  
③ Dry in the ambient for 2 hours and wipe the surface with a cloth.  
④ Apply topcoat (acrylic-urethane 10:1)

Test : After drying at room temperature for 7days.

## ■ Physical Properties

Item	Property	
Appearance	Light brown liquid	
Specific gravity	0.94 (at 25°C)	
Standard application amount	Red rust surface	0.1kg/㎡
	Unrusted surface	0.05kg/㎡
Performance	Brush, Roller, Spray Gun	
Dry to touch	2 hours at 20°C, 60% humidity	
Shelf life	Not changed for 6 months at 20°C	

<b>F</b> ★★★★★	
Formaldehyde emission grade	
Registered No. T18009	Japan Paint Manufacturers Association
Contact with	<a href="http://www.toryo.or.jp">http://www.toryo.or.jp</a>

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