MONOCHEM

MONOBOND RI

Rust Inhibitive Primer

TECHNICAL BULLETIN

MADE IN U.S.A.

PRODUCT DESCRIPTION:

Item No. 1880 & 1890

MONOBOND Rust Inhibitive Metal Primer is a water based zinc-chromate and self cross-linking acrylic/urethane resin containing zinc oxide. It is fast drying and has low VOC and low odor while displaying excellent hardness. **MONOBOND RI** is designed to provide superior adhesion, corrosion and rust protection for interior and exterior metal applications. It dries to flat finish and can be coated with water base or solvent base enamels.

BASIC USES:

MONOBOND RI can be used for vertical or horizontal, interior and exterior metal applications. It and can be top coated with acrylic/latex, oil-based alkyds, epoxies, urethanes, etc. Common applications include:

- •Galvanized Steel Primer
- •Aluminum Primer
- •Structural Steel Primer
- •Beams and Columns
- •Machinery and Equipment
- •Doors and Jambs
- •Handrails and Bollards
- •All Iron and Steel Surfaces

ADVANTAGES:

- •Vertical/Horizontal
- •Interior/Exterior
- •Water clean-up
- •Low to no odor
- •Quick dry to recoat time
- •Apply down to 40°F.
- •Long term corrosion resistance
- •Acceptable for use in USDA inspected facilities
- •Spray, Brush, or Roll On

Product Qualifications	
Cal Green	Yes
OTC (Industrial Maintenance)	Yes
SCAQMD (Industrial Maintenance)	Yes
CARB (Industiral Maintenance)	Yes
LEED (New Construction)	Yes
LEED (New Schools / CHPS)	Yes

SYSTEM APPLICATION RECOMMENDATION:

MONOBOND Rust Inhibitive Primer (1 coat) Allow to dry for 30-60 minutes. Don't exceed 24 hours.
Apply one of the following water base topcoats:

1. **Permashield DTM**, 1K, Acrylic/Urethane
2. **EpoxyGuard Enamel**, 1K, Pre-Catalyzed Enamel
3. **Monochem 200**, 2K, 100% Water Base Epoxy
4. **Permashield 100**, 1K, Acrylic/Urethane
5. **Permashield 200**, 2K, Polyrethane, top tier Chemical Resistance
6. **Permashield 2000**, 2K, Polyaspartic, Fast Cure

TECHNICAL DATA:

Composition	Urethane-Modified Acrylic
White Base Solids by Weight	46%± 2
White Base Solids by Volume	38% ± 2
Neutral Base Solids by Weight	37%± 2
Neutral Base Solids by Volume	36% ± 2
VOC level	<100 g/L
White Base Weight per Gallon	10.2 Lbs
Clear Base Weight per Gallon	9.2 Lbs
Viscosity	90-100 KU
Color	White Base and Clear Base

System Tested:
Substrate: Steel
Surface Preparation: SSPC-SP10
1-Permashield Rust Inhibitive Primer; 2-Permashield DTM

Test Results:

Adhesion, Per ASTM D4541	600 PSI
Pencil Hardness, Per ASTM D3363	H
Corrosion Weathering, Per ASTM D5894, 10 Cycles, 3400 Hrs	Passes
Salt Fog Resistance, Per ASTM B117, 1300 Hrs	Passes
Moisture Condensation Resistance, Per ASTM D4585, @100°F, 1300 Hrs	Passes
Direct Impact Resistance, Per ASTM D2794	>140 In/Lbs
Flexibility, Per ASTM D522, 180° bend, ¼" mandrel	Passes
Dry Heat Resistance, Per ASTM D2485	200°F.
Flash Point	Non-Flammable
Recommended Dry Film Thickness	2-2.5 Mils
Coverage Rate	200-325 sq/ft/gallon
Wet Mil to Achieve DFT	5-8 Mils
Full Cure	One Week
Shelf Life	2 Years

SURFACE PREPARATION:

- •Conduct a thorough test patch to ensure proper adhesion.
- •Sanding and scuffing the surface will maximize adhesion.
- •Surfaces must be clean, dry and free of rust/corrosion, dirt, chalk, grease, oils, salts and contaminants that inhibit proper adhesion.

METAL SURFACES:

New metal must be weathered a minimum of six (6) months or be cleaned to remove residual oil. Residue can be removed using environmentally safe cleaner, such as Simple Green®.
Scrape and remove all loose/flaking rust. Wipe surface clean. The surface must be dry and free from all dirt, dust, oil, grease, wax and all loose materials and contaminants that can affect the adhesion of the coating. For best results make sure the surface is cleaned to a minimum SSPC-SP2 standard of surface preparation. For best results, use commercial blast cleaning per SSPC-SP6. Prime with **MONOBOND RI** the same day as cleaned.

Non-Ferrous Metals (galvanized, aluminum, stainless steel, etc.): Remove all oils or films with a neutral detergent or emulsion cleaner. Blast lightly with fine abrasives or conduct a light etching. Then rinse with Zinc and coat within 3 hours with **MONOBOND RI** to avoid oxidation.

Ferrous Metals: Remove all the loose rust, dirt, grease or other contaminants by one of the following depending on the degree of cleanliness required. Blast SSPC-SP3; SSPC-SP2; SSPC-SP6;

MONOPOLE INC.
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MONOPOLE INC.
Manufacturer of
U.S. SPECIALTY COATINGS

4661 Alger Street • Los Angeles, CA 90039

Tel: 818-500-8585 • Fax: 818-502-0818

www.monopoleinc.com • Email: info@monopoleinc.com

SSPC-SP7. Blast lightly with fine abrasives or conduct a light etching. Then rinse with Zinc and apply **MONOBOND RI** within 3 hours to avoid oxidation.

Previously Painted Surfaces: If in sound condition, clean the surface of all adhesion affecting contaminants. Smooth, hard, or glossy coatings and surfaces should be dulled by abrasion.

Apply a test area, allowing primer to dry one week before testing the adhesion. If adhesion is poor, additional abrasion of the surface and/or removal of the previous coating may be necessary. Priming with **MONOCHEM 21** "stick to anything primer" is another option.

Drying Time:

	77°F±2	40°F±2 @ R.H.60±5%
•Surface Dry:	30-60 Min	1.5-2 Hrs
•Recoat Time:	30-60 Min	1.5-2 Hrs
•Cure Time:	30 Days	45 Days

Cooler Temperature, higher humidity and film thickness will require longer drying time.

Coverage Rates:
Approximately 200-325 sq/ft/gallon. The actual coverage may vary depending on surface profile, substrate type and method of application.

•Recommended Wet Film……5.0-8 mils
•Recommended Dry Film……2-2.5 per coat

APPLICATION METHOD:
•Brush: Use a ¼" good quality synthetic bristle brush.
•Roller: Use a ½" good quality synthetic nap roller cover.
•Airless Spray:
 •Fluid Pressure: 2000-3000 psi
 •Fluid Tip: 0.013-0.019
 •Filter Mesh: 60-100

AIR-ATOMIZED SPRAY:
 Atomized Pressure: 40-60 psi
 Fluid Pressure: 40-60 psi
 Fluid Nozzle: 25 psi

APPLICATION RECOMMENDATION:
One coat is required. Allow 2-3 hours of dry time before top coating. If 24 hours are exceeded, the **MONOBOND RI** will need to be abraded for proper adhesion. Always conduct a test patch for approval prior to painting the substrate.

PACKAGING:
MONOBOND RI is packaged in one-gallon cans and five-gallon pails.
White Base: *Short-Fill: 2 Ounces / Gallon*
#1890-05: 5-Gallon Pail #1890-01: 1-Gallon Can

Neutral Tint Base: *Short-Fill: 6 Ounces / Gallon*
#1880-05: 5-Gallon Pail #1880-01: 1-Gallon Can

SHELF LIFE:
One (1) years in original sealed and covered container at temperature between 60°F and 80°F.

EQUIPMENT CLEANUP:
Clean tools and equipment immediately after use with warm soap and water.

SAFETY & PRECAUTIONS:
- Refer to **MONOBOND RI** SDS sheets before use.
- Do not apply when surface temperature is below 50°F or above 90°F.
- Do not apply in windy conditions or if rain is imminent within 48 hours.
- Check adhesion of old paint before repainting
- Stir materials throughly before thinning (up to 8 ounces per gallon).
- Avoid exposure of fresh applications to steam for 48 hours and to washing or scrubbing for seven 7 days.
- Protect from freezing. Keep away from children.
- Provide adequate ventilation and wear proper protective equipment during application.

FIRST AID:
Eye Contact: Flush the affected eyes with fresh water for at least 15 minutes and call a physician.
Skin Contract: Wash skin with soap and water.
Inhalation: Get fresh air if affected by the vapor or spray mist.
Ingestion: Do not induce vomiting and call a physician immediately.

WARNING! Removal of old paint by sanding, scraping, or other means may generate dust or fumes that contain lead. Exposure to lead dust or fumes may cause brain damage or other adverse health affects, especially in children or pregnant women. For more information, call the National Lead Information Center at 1-800-424-LEAD or contact your local health authority. Do not use hydrocarbon solvents for cleaning.