mcu miozinc

technology description

single component moisture cure urethane coating

technology features

applies in 6% to 99% humidity
applies to damp substrates
resistant to moisture within 30min. of application
cures fast, even at -12°c
no induction time
superior adhesion to various substrates
no recoat time limit
no short or long term cracking
high chemical resistance
high resistance to blistering
excellent abrasion resistance
compatible with most conventional coatings
suitable for maintenance and new construction

product description

By combining zinc and MIO into our proprietary blend moisture cured resin, MCU-Coatings created an anti-corrosive primer that has proven to be more surface tolerant than epoxy mastic coatings, and to outperform perfectly applied inorganic zinc primers.

technology features

Recommend for UHP WJ, power tool cleaning, dry/wet blasting.
Excellent performance to minimal surface prep.
Tolerates flash rusting
Good flow into pittings
High tolerance to salts & chlorides
Compatible with most old coatings
No maximum recoat-window
Wide DFT tolerance
Over-coatable by itself
Recommended for immersion and atmospheric exposure
VOC compliant

area of use

substrates
Carbon steel - Cast Iron
Previously existing coating
Overlapping/touch up:
-Non-ferro
-Metalized
-Galvanised
-Aluminium

possible uses
Ballast Tanks
Bridges
Structural Steel
Tanks interiors
Work Boats
Offshore Platforms
Marine/Port Facilities
Material Handling Equipment
Refineries
Pulp and Paper Mills
Pipes
Chemical Processing Facilities
Floors
Hydropower Facilities
Water and Wastewater Treatment Facilities

ready reference information

resin type:	urethane
pigment type:	zinc & micaceous iron oxide
sheen:	flat
colours:	standard green & red oxide
volume solids:	72.0% ± 2.0
VOC: (volatile organic content)	<2.17lb/gal (260 g/l)
theoretical coverage:	@1 mil dft: 1155 ft2/gal (@ 25 µm dft: 28.8 m2/l)

recommended film thickness
wet: 4.2 - 13.9 mils (106 - 353 microns)-not thinned
dry: 3.0 - 10.0 mils (76 - 254 microns)

recommended coverage per coat:
115 ft2/gal at 10.0 mils dft - 385 ft2/gal at 3.0 mils dft
(2.8 m2/l at 254 microns dft - 9.4 m2/l at 76 microns dft)
thinning: mcu-thinner, mcu-thinner 25
clean up: mcu-thinner, mcu-thinner 25

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mcu coatings
best in corrosion protection

mcu miozinc

drying times and temperatures

*at 50% humidity	50°F / 10°C		72°F / 24°C		95°F / 35°C	
	without QuickCure	***with QuickCure***	*without QuickCure*	***with QuickCure***	*without QuickCure*	***with QuickCure***
tack free	1 h	-	30 min	-	20 min	-
recoat minimum	6 h	**1 h**	4 h	**30 min**	3 h	**20 min**
ful cure	10 days	**7 days**	7 days	**5 days**	5 days	**4 days**

surface preparation

Ferrous Metal
Use SSPC-SP1 solvent cleaning to remove oil and grease or other contaminants prior to employing surface preparation methods.

Blast Clean surfaces for immersion or severe service projects by ISO 8504-2 methods to ISO 8501-1 SA 2.5 or SSPC-SP10/NACE No. 2 (visual standard SSPC vis 1) Near White Metal finish OR by SSPC 12/ Nace 5.0 High or Ultra High Pressure water jetting methods to WJ 2 M (visual standard SSPC vis 4/Nace vis 7) very thorough cleaning finish (not applicable for new steel) OR by SSPC-TR2/Nace 6G198 Wet abrasive blast cleaning methods to WAB 10 M (visual standard SSPC vis 5/Nace vis 9) Wet near white metal blast clean finish. Consult your MCU-Coatings representative for minimal surface preparation.

Prepare surfaces for non-immersion or atmospheric service projects by ISO 8504-2 methods to ISO 8501-1 SA 2 or SSPC-SP6/NACE No. 3 (visual standard SSPC vis 1) Commercial Blast Clean finish OR by SSP 12/Nace 5.0 High or Ultra High pressure water jetting methods to WJ 4 M (visual standard SSPC vis 4/Nace vis 7) OR by SSPC-TR2/ Nace 6G198 Wet abrasive blast cleaning methods to WAB 6 M (visual standard SSPC vis 5/Nace vis 9) Wet commercial blast clean finish. For minimum surface preparation, use conscientious hand and power tool cleaning methods in accordance with ISO 8504-3 or SSPC-SP 2 and 3 to remove corrosion and loose or failing paint to ISO 8501-1 St 2 or SSPC-SP 2 and 3 (visual standard SSPC vis 3). Feather-edges of sound, existing paint back to a firm edge.

Blast cleaning methods should produce a surface profile of 1.0 - 2.0 mils (25-50 microns).

Corten Steel
Prepare surfaces using SSPC-SP12/NACE No. 5 Low Pressure Water Cleaning methods. Supplement SSPC-SP 12 LPWC with ISO 8501-1 St 2 (SSPC-SP 2 or 3) hand or power tool cleaning where areas show excessive corrosion. Use SSPC-SP1 solvent cleaning to remove oil and grease prior to surface preparation methods.

Galvanized Metal
Prepare surfaces using SSPC-SP1 Solvent Cleaning and SSPC-SP12/ NACE No. 5 Low Pressure Water Cleaning methods to remove surface contamination. Supplement weathered galvanized surface preparation with ISO 8501-1 St 2 (SSPC-SP 2 and 3) hand and power tool cleaning to remove excessive corrosion and impart surface profile on bare metal. Supplement new galvanized surface cleaning with mechanical abrasion to impart surface profile and support mechanical adhesion.

Good Practices
The surface to be coated must be dry, clean, dull, and free from dirt, grease, oil, rust, mill scale, salts or any other surface contaminants that interfere with adhesion.

Ensure welds, repair areas, joints, and surface defects exposed by surface preparation are properly cleaned and treated prior to coating application.

Areas of oxidation after surface preparation and prior to coating application, should be prepared to specified standard

Consult the referenced standards, SSPC-PA1 and your MCU-Coatings Representative for additional information or recommendations.

application information

MCU-Miozinc can be applied by brush, roll, airless spray and conventional spray methods (one grade only).
Follow proper mixing instructions before applying.

Mixing
Material temperature must be 5° F (3°C) above the dew point before opening and agitating.
Power mix thoroughly prior to application.
Do not keep under constant agitation.
Apply a 3-6 oz (9-18cl) solvent float over material to prevent moisture intrusion and cover pail.

Brush/Roller

Brush:	Natural Fiber
Roller:	Natural or synthetic fiber cover
Nap:	1/4" to 3/8"
Core:	Phenolic
Reduction:	Typically not required. If necessary, reduce with MCU-Thinner 25.

Airless Spray

Pump Ratio:	28-40:1
Pressure:	2400-2800 psi (170-20 Bar)
Hose:	1/4" to 3/8"
Tip Size:	.013-.021
Filter Size:	60 mesh (250 µm)
Reduction:	Typically not required. If necessary, reduce with MCU-Thinner, MCU-Thinner 25.

Conventional Spray

Fluid Nozzle:	E Fluid Tip
Air Cap:	704 or 765
Atomizing Air:	45-75 lbs.
Fluid Pressure:	15-20 lbs.
Hose:	½" ID; 50' Max
Reduction:	Typically not required. If necessary, reduce with MCU-Thinner, MCU-Thinner 25.

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surface preparation

Reducer
MCU-Thinner, MCU-Thinner 25. Reduction is typically not required. If necessary, thin up to 10% with recommended thinner.

Clean up
MCU-Thinner, MCU-Thinner 25. If MCU-Coatings thinners are not available, use MEK, MIBK, Xylene, a 50:50 blend of Xylene and MEK or MIBK, or acetone for clean up only. Do not add unauthorized solvents to a MCU-Coatings coating.

Application Conditions

Temperature: 10°-122° F (-12°-50° C)
This temperature range should be achieved for ambient, surface and material temperature. Substrate must be visibly dry. MCU-Thinner 25 is recommended for spray application in temperatures above 90°F.

Relative Humidity: 6%-99%

Coating Accelerator: QuickCure Accelerator. See MCU-Coatings's QuickCure Accelerator Product Data for information.

Storage
Store off the ground in a dry, protected area in temperature between 40-100°F (4-38°C). MCU containers must be kept sealed when not in use. Use a solvent float to reseal partial containers.

typical systems

		(spot) primer	DFT	intermediate	DFT	topcoat	DFT	Total DFT
carbon steel	atmospheric	mcu-zinc/mcu-miozinc	75	mcu-miomastic*	75	mcu-(mio/alu) topcoat	75	225
3 coat systems	interior	mcu-zinc/mcu-miozinc	75	mcu-miomastic*	75	mcu-mastic	75	225
	overcoating	mcu-miozinc	75	mcu-zincomastic	75	mcu-(mio/alu) topcoat	75	225
	refined tar based	mcu-zinc/mcu-miozinc	75	mcu-ferroguard	125	mcu-ferroguard	125	325
	immersion/splash zone	mcu-zinc/mcu-miozinc	75	mcu-mastic	75	mcu-mastic	75	225

		sealer 20% thinned	DFT	primer	DFT	topcoat	DFT	Total DFT
concrete	atmospheric	mcu-masthetic	NA	mcu-masthetic	75	mcu-(mio/alu) topcoat	75	150
3 coat systems	interior	mcu-masthetic	NA	mcu-masthetic	75	mcu-mastic	125	150
	refined tar based	mcu-ferroguard	NA	mcu-ferroguard	125	mcu-ferroguard	125	250
	immersion	mcu-ferroguard	NA	mcu-ferroguard	125	mcu-ferroguard	125	250

		spot prime	DFT	intermediate	DFT	topcoat	DFT	Total DFT
galva, alu, non-ferro	atmospheric	mcu-zinc/mcu-miozinc	75	mcu-miomastic*	75	mcu-(mio/alu) topcoat	75	150
	interior	mcu-zinc/mcu-miozinc	75	mcu-miomastic*	75	mcu-mastic	75	150
	overcoating	mcu-miozinc	75	mcu-zincomastic	75	mcu-(mio/alu) topcoat	75	225
	refined tar based	mcu-zinc/mcu-miozinc	75	mcu-ferroguard	125	mcu-ferroguard	125	250
	immersion/splash zone	mcu-zinc/mcu-miozinc	75	mcu-mastic	75	mcu-mastic	75	150

		spot prime	DFT	intermediate	DFT	topcoat	DFT	Total DFT
metalised	atmospheric	mcu-aluprimer diluted + QuickCure	35	mcu-miomastic*	75	mcu-(mio/alu) topcoat	75	185
	interior	mcu-aluprimer diluted + QuickCure	35	mcu-miomastic*	75	mcu-mastic	75	185
	overcoating	mcu-miozinc	75	mcu-zincomastic	75	mcu-(mio/alu) topcoat/mastic	75	225
	refined tar based	mcu-aluprimer diluted + QuickCure	35	mcu-ferroguard	125	mcu-ferroguard	125	285
	immersion/splash zone	mcu-aluprimer diluted + QuickCure	35	mcu-mastic	75	mcu-mastic	75	185

*Replace by MCU-Masthetic if smooth finish is desired

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ordering information

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Note:
- ◇ This system sheet is to be used as a general guide line only. Please consult your MCU representative for detailed specifications and recommendations
- ◇ MCU-Zinc can be replaced by MCU-Miozinc at all times. MCU-Zinc is best performing
- ◇ MCU-Mastic can be used in atmosferic exposure when colour and UV resistance are not of importance. UV will have minimal and temporarely influence to the corrosion resistance of the coating
- ◇ It is recommended to spot prime twice for splash zone or immersion service
- ◇ One coat less, reduced DFT or lower cost systems are available in less agressive environments. Consult your MCU Technical representative.
- ◇ Always do adhesion test when overcoating, especially when applying MCU-(Alu)Topcoat or MCU-Mastic directly to old coatings

ordering information

package size:	5 and 10 liter pails
shelf life:	**18 months from date of shipment** when stored unopened at 75°F (24° C)

shipping information

flash point:	80°F (26.6°C)
weight/gallon:	20.6 ± 1.0 lbs (2.47 ± .12 kg/l)
DOT HAZARD CLASS	3
DOT PACKAGING GROUP	III
DOT LABEL	FLAMMABLE LIQUID
DOT SHIPPING NAME	PAINT
DOT PLACARD	FLAMMABLE LIQUID
UN/NA NUMBER	1263

safety precautions

This product is for industrial use only

WARNING: Vapour and spray mist is harmful. Consult the Material Safety Data Sheet. Use an approved respirator when applying this product. Consult the MSDS for recommendations. Protect skin and eyes from contact. This product contains organic solvents and polyisocyanates. Do not use if you have a chronic or allergic reaction to isocyanates or organic solvents.

warranty

MCU-Coatings warrants its products to be free from defects in materials. MCU-Coatings's sole obligation and Buyer's exclusive remedy in connection with the products shall be limited at MCU-Coatings's option to either replacement of products not conforming with this warranty or to credit the Buyer's account the invoiced amount of the non-conforming products. Any claim under this warranty must be made by Buyer to MCU-Coatings in writing within five (5) days of Buyer's discovery of the claimed defect, but in no event later than the expiration of the applicable shelf- life, or six months from the delivery date, whichever is earlier. Buyer's failure to notify MCU-Coatings of such non-conformance as required herein shall bar Buyer from recovery under this warranty.

MCU-Coatings makes no other warranties concerning the products. No other warranties, whether expressed, implied, or statutory, such as warranties of merchantability or fitness for a particular purpose, shall apply. In no event shall MCU-Coatings be liable for consequential or incidental damages.
Any recommendations or suggestions relating to the use of the products made by MCU-Coatings, whether in its technical literature, or in response to specific inquiry, or otherwise, is based on data believed to be reliable; however, the products and information are intended for use by Buyers having requisite skill and know-how in the industry, and therefore it is for Buyer to satisfy itself of the suitability of the products for its own particular use and it shall be deemed that Buyer has done so at its sole discretion and risk. Variation in environment, changes in procedures of use or extrapolation of data may cause unsatisfactory results.

limit of liability

MCU-Coatings' liability on any claim of any kind, including claims based upon MCU-Coatings' negligence or strict liability, for any loss or damage arising out of, connected with or resulting from the use of the products, shall in no case exceed the purchase price allowable for the products or part thereof that give rise to the claim. In no event shall MCU-Coatings be liable for consequential or incidental damages. Published Product Data Sheets are subject to change without notice. Contact your MCU-Coatings Representative for current Product Data Sheets.

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