

Product Description

Revision Date 043004

MC-Shieldcoat is Wasser's aesthetic, gloss-finish, moisture-cure urethane, aliphatic topcoat. It provides excellent resistance to UV, weathering and abrasion in a moisture cure urethane coating. This topcoat selection has reliable performance for application in various service environments, project types and substrates.

Area of Use

<u>Substrates</u>		<u>Possible Uses</u>
Over properly prepared:		
Ferrous Metal	Concrete	Structural Steel
Galvanized Metal	Concrete Block	Food Processing
Aluminum/Non-Ferrous Metal		Work Boats
Metallized		Refineries
Previously Existing Coatings		Marine/Port Facilities
		Offshore Platforms
		Bridges
		Tank Exteriors
		Floors
		Material Handling Equipment
		Pulp and Paper Mills
		Chemical Processing Facilities
		Pipes
		Hydropower Facilities
		Water and Wastewater Treatment Facilities

Ready Reference Information

Resin Type:	Aliphatic Urethane	Theoretical Coverage: @1 mil DFT: 978 ft ² /gal (@ 25 µm DFT: 24.0 m ² /l)
Pigment Type:	Coloring	Recommended Film Thickness
Sheen:	Gloss	Wet: 1.6 - 3.3 mils (41 - 84 microns)
Colors:	White	Dry: 1.0 - 2.0 mils (25 - 51 microns)
Volume Solids:	61.0% ± 2.0	Recommended Coverage per coat:
VOC: (Volatile Organic Content)	<2.8 lb/gal (340 g/l)	489 ft ² /gal at 2.0 mils DFT - 978 ft ² /gal at 1.0 mils DFT (12.0 m ² /l at 51 microns DFT - 24.0 m ² /l at 25 microns DFT)
		Thinning: MC-Thinner, MC-Thinner 100, MC-Thinner XMT
		Clean up: MC-Thinner, MC-Thinner 100, MC-Thinner XMT

Drying Times and Temperatures

*At 50% Humidity	50° F/10° C		75° F/24° C		95° F/35° C	
	without PURQuik®	with PURQuik®	without PURQuik®	with PURQuik®	without PURQuik®	with PURQuik®
Tack Free	1 hr	--	30 min	--	20 min	--
Recoat Minimum ¹	10 hrs	1 hr	8 hrs	30 min	6 hrs	20 min
Full Cure	10 days	7 days	7 days	5 days	5 days	4 days

Refer to Wasser's PURQuik® Accelerator Product Data for additional information

*Humidity, temperature and coating thickness will affect recoat and curing times

1. On clean surface, recoat within 30 days. After 30 days, do a test patch.

Product Features

Single Component Moisture Cure Urethane	Low VOC	No Dew Point Restrictions (Substrate must be visibly dry)
No Mixing Errors.	UV, Impact, and Abrasion Resistant	
No Pot Life	Versatile gloss topcoat for various substrates	Can be applied in below freezing temperatures (no ice or frost)
Easy to apply by brush, roller or spray methods	Can be applied at 99% humidity	Compatible with PURQuik® Accelerator for faster recoat and cure times.

MC-Shieldcoat

Recommended Systems

Ferrous Metals (New Construction / Full Removal):

1 st Coat: MC-Zinc	3.0-5.0 mils DFT
Or MC-Miozinc	
2 nd Coat: MC-Ferrox B	3.0-5.0 mils DFT
3 rd Coat: MC-Shieldcoat	1.5-2.0 mils DFT
Total System DFT:	7.5-12.0 mils DFT

Ferrous Metals (Overcoat):

1 st Coat: MC-Miozinc (Spot Prime)	3.0-5.0 mils DFT
2 nd Coat: MC-Miomastic	3.0-5.0 mils DFT
3 rd Coat: MC-Shieldcoat	1.5-2.0 mils DFT
Optional	
4 th Coat MC-Shieldcoat	1.5-2.0 mils DFT
Total System DFT:	9.0-14.0 mils DFT

Aluminum/Non-Ferrous Metals/ Galvanized Metal:

1 st Coat: MC-CR	3.0-4.0 mils DFT
2 nd Coat: MC-Shieldcoat	1.5-2.0 mils DFT
Total System DFT:	4.5-6.0 mils DFT

1 st Coat: MC-Ferrox B	3.0-5.0 mils DFT
2 nd Coat: MC-Shieldcoat	1.5-2.0 mils DFT
Total System DFT:	4.5-7.0 mils DFT

Concrete¹ (Interior/Exterior):

1 st Coat: MC-CR	3.0-4.0 mils DFT
2 nd Coat: MC-Shieldcoat	1.5-2.0 mils DFT
Optional Clear Coat	
3 rd Coat: MC-Clear	1.5-2.0 mils DFT
Total System DFT:	6.0-8.0 mils DFT

1 st Coat: MC-Shieldcoat	1.5-2.0 mils DFT
2 nd Coat: MC-Shieldcoat	1.5-2.0 mils DFT
Optional Clear Coat	
3 rd Coat: MC-Clear	1.5-2.0 mils DFT
Total System DFT:	4.5-6.0 mils DFT

1. Prime coat for concrete may be reduced up to 25% to facilitate coating penetration. Subsequent coating applications may be reduced as necessary up to 10%. Thin in accordance with local and federal regulations.

Note: Use over recommended primers or intermediates for ferrous metal. Not recommended for direct to ferrous metal applications.

***Other Systems are available and appropriate. Contact your Wasser Representative for any questions.**

Performance Testing Data

System: MC-Miozinc
MC-CR
MC-Shieldcoat

@75°F and 50% RH 7 day min. cure

Abrasion Resistance: 105 mg loss
(ASTM D4060 – CS-17 Wheel, 1,000 cycles/kg load)

Adhesion: 1640 psi
(ASTM D4541)

Impact: (ASTM 2794)
Direct: 160
Reverse: 20

Prohesion: Blistering: None
(ASTM G85 @ 5000 hrs) Scribe Rate: 4.0

Dry Heat Resistance: 280°F (138°C)
Continuous:

*Contact Wasser High-Tech Coatings for detailed testing of this product

Compatible Coatings

Primer:
MC-Prepbond 2.8 MC-Prepbond 200
MC-Zinc 2.8 MC-Zinc 200
MC-Miozinc 2.8 MC-Miozinc 200

Intermediates:
MC-Ferrox B 2.8 MC-Ferrox B 200
MC-Miomastic 2.8 MC-Miomastic 200
MC-CR 2.8 MC-CR 200

Clear Finish Topcoats:
MC-Clear
MC-Aroclear (Interior)

Coating Accelerator:
PURQuik® Coating Accelerator

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Surface Preparation

Ferrous Metal

Apply to clean, dry, Wasser recommended primers. Refer to the primer Product Data for additional information.

Aluminum/Galvanized/Non-Ferrous 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 SSPC-SP2 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.

Concrete/Concrete Block

The surface must be dry, free of surface contaminants, and in sound condition. Grease, and oil should be removed by ASTM D4258-83 (Reapproved 1999) and release agents should be removed by ASTM D4259 - 88 (Reapproved 1999). Refer to SSPC-SP13/NACE No 6 mechanical or chemical surface preparation methods for preparing concrete to suitable cleanliness for intended service. Surface preparation methods should impart sufficient surface profile for mechanical adhesion to occur. Ensure surface is thoroughly rinsed and dry prior to coating application. Allow a minimum 7 - 14 days cure time for new concrete prior to preparation and application.

Previously Existing Coatings

Prepare surfaces using SSPC-SP12/NACE No. 5 Low Pressure Water Cleaning methods to remove surface contamination. Supplement SSPC-SP 12 LPWC with SSPC-SP1 Solvent Cleaning and SSPC-SP2 and 3 Hand and Power Tool clean areas of corrosion and loose or flaking paint (feather edges of sound, existing paint back to a firm edge). Spot prime clean, bare metal with Wasser recommended primer. Sand glossy surfaces to provide profile. Apply a test sample to a small area to determine coating compatibility.

Good Practices

MC-Shieldcoat is designed for application to a variety of substrates and tightly adhering, previously existing coatings. Apply a test sample to a small area to determine coating adhesion and/or compatibility. Spot prime any areas cleaned to bare metal with a Wasser recommended primer.

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.

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

Application Information

MC-Shieldcoat can be applied by brush, roll, airless spray and conventional spray methods. Follow proper mixing instructions before applying.

Mixing:

Material temperature must be 5° F 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 solvent float over material to prevent moisture intrusion and cover pail.

Brush/Roller:

Brush: Natural Fiber

Roller: Natural or synthetic fiber cover

Nap: ¼" to ⅜"

Core: Phenolic

Reduction: Typically not required. If necessary, reduce with MC-Thinner 100.

Airless Spray:

Pump Ratio: 28-40:1

Pressure: 2400-2800 psi

Hose: ¼" to ⅜"

Tip Size: .007-.015

Filter Size: 60 mesh (250 µm)

Reduction: Typically not required. If necessary, reduce with MC-Thinner or MC-Thinner 100.

Conventional Spray: (DeVilbiss MBC, JGA or equivalent)

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 MC-Thinner or MC-Thinner 100.

Reducer: MC-Thinner, MC-Thinner 100, (if VOC regulations restrict thinning, use MC-Thinner XMT). Reduction is typically not required. If necessary, thin up to 10% with recommended thinner. Thin in accordance with local and federal regulatory standards.

Clean up: MC-Thinner, MC-Thinner 100. If Wasser 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 Wasser coating.

Application Conditions:

Temperature: 20°-100° F (-8°-38°C)

This temperature range should be achieved for ambient, surface and material temperature. Substrate must be visibly dry. MC-Thinner 100 is recommended for spray application in temperatures above 90°F.

Relative Humidity: 6%-99%

Coating Accelerator: PURQuik® Accelerator. See Wasser's PURQuik® 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.

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Certifications and Qualifications

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VOC Compliant (National Standards – Industrial Maintenance Coating, and Concrete Protective Coating)
Qualified for use in USDA and FDA inspected facilities

Ordering Information

Product Numbers: W51.7 White
Package Size: 1 gallon and 5 gallon pails
Shelf Life: 12 months from date of shipment when stored unopened at 75°F (24°C)

Shipping Information

Flash Point: 80°F (26.6°C)
Weight/gallon: 11.0 ± 1.0 lbs
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

DANGER!

VAPOR AND SPRAY MIST HARMFUL. OVEREXPOSURE MAY CAUSE LUNG DAMAGE. MAY CAUSE ALLERGIC SKIN AND RESPIRATORY REACTION, EFFECTS MAY BE PERMANENT, MAY AFFECT THE BRAIN OR NERVOUS SYSTEM CAUSING DIZZINESS HEADACHE OR NAUSEA. CAUSES EYE, SKIN, NOSE AND THROAT IRRITATION. FLAMMABLE LIQUID AND VAPOR.

CONTAINS: Petroleum Distillates, Xylene, Ethylbenzene, Methyl-n-Amyl Ketone, Isophorone Diisocyanate, Homopolymer HDI
NOTICE: Reports have associated repeated and prolonged occupational over-exposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling contents may be harmful or fatal. INDIVIDUALS WITH LUNG OR BREATHING PROBLEMS OR PRIOR REACTION TO ISOCYANATES MUST NOT BE EXPOSED TO VAPOR OR SPRAY MIST. **Use Only With Adequate Ventilation.** Do not breathe dust, vapors or spray mist. Ensure fresh air entry during application and drying. If you experience eye watering, headache or dizziness or if air monitoring demonstrates vapor/mist levels are above applicable limits, wear an appropriate, properly fitted respirator (NIOSH approved) during and after application. Follow respirator manufacturer's directions for respirator use. Do not get in eyes, on skin or on clothing. Wash thoroughly after handling. Keep away from heat, sparks and flame. Vapor may cause flash fire.

KEEP OUT OF REACH OF CHILDREN

FIRST AID: If affected by inhalation of vapor or spray mist, remove to fresh air. If breathing difficulty persists or occurs later, consult a physician and have label information available. In case of eye contact, flush immediately with plenty of water for at least 15 minutes and get medical attention; for skin, wash thoroughly with soap and water. If swallowed, get medical attention immediately. If swallowed, do not induce vomiting. Get medical attention immediately. Wash clothing before reuse. Thoroughly clean or destroy contaminated shoes.

Keep container closed when not in use. If spilled, contain spilled material and remove with inert absorbent. Dispose of contaminated absorbent, container and unused contents in accordance with local, state and federal regulations.

WARNING: This product contains a chemical known to the state of California to cause cancer and birth defects, or other reproductive harm.

Obtain and Read the Material Safety Data Sheet Before Using.
INTENDED FOR PROFESSIONAL USE ONLY.

W51.7

Note: Ingredients and VOC/VOS may vary for products with catalysts, tint bases, and other colors

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