

ZeraDeck™ MRW System

Mechanical Room Waterproofing System



DESCRIPTION

ZeraDeck™ MRW System is a VOC compliant, multi-coat, elastomeric, waterproofing system for interior applications. It consists of a polyurethane elastomeric membrane, ZeraDeck™ 95 Membrane; and a tough, flexible, epoxy topcoat, ZeraDur™ 125, that can be seeded to provide a non-slip coating system if required. Together they provide an attractive, durable, monolithic, waterproofing system.

WHERE TO USE

ZeraDeck™ MRW System is a cold applied, deck coating system, primarily designed for waterproofing mechanical equipment rooms, computer room floors, and other interior areas requiring an effective waterproofing system.

BENEFITS

- Contains no xylene or “Hazardous Air Pollutant” solvents (HAP’s free); free of isocyanates
- VOC compliant; low odour
- Easy to apply in a two-coat application
- Moisture insensitive during the application and throughout the cure (not affected by humidity)
- Long pot life
- ZeraDeck™ 95 Membrane retains it’s integrity even if the substrate movement causes hairline cracks of up to 1.6 mm (1/16”) in width
- Resistant (ZeraDur™ 125) to diesel fuel, gasoline, and other petroleum based products; resistant also to hot water and cleaners

APPLICATION

SURFACE PREPARATION

New concrete must be cured for a minimum of 28 days before applying the ZeraDeck™ MRW System. The substrate must be above 10°C (50°F) and must be free of all dirt, waxes, previously applied coatings, oil, grease, laitance and any foreign matter that may interfere with the bond of the coating to the substrate. Cracks and surface defects should be repaired prior to application of the coating. All concrete and steel surfaces to be coated should be shot blasted, or mechanically cleaned to provide a clean tooth for the coating system.

DETAILING

Joints or cracks should be repaired prior to the application of ZeraDeck™ MRW System. Cracks and cold joints less than 1.6 mm (1/16”) wide should be coated over with the ZeraDeck™ 95 Membrane to yield a total film thickness of 20 mils. All cracks and joints greater than 1.6 mm

(1/16”) wide must be routed and sealed with an approved two-component, polyurethane based, elastomeric sealant. Any coving or vertical bases should be coated using ZeraDeck™ 95 Membrane mixed with 2 % (by weight) of fumed silica to improve it’s non-sag properties.

PROPERTIES		
ZeraDeck™ 95 ZeraDur™ 125 Membrane		
Handling Properties (tested @ 23° C (74° F))		
Mix Ratio, by volume, A/B	4/1	2/1
Viscosity (Mixed), cps	3,600	1,200
Mixed Weight (Density), kg/litre (lb/ gal.)	1.06 (8.8)	1.22 (10.2)
Solids Content	95 %	100 %
Pot Life	1 hour	20 minutes
Set Time	16 hours	12-16 hours
Recoat Time	16 hours	-
Full Cure	7 days	7 days
DATA - Cured Film (7 days Cured @ RT/ 50% RH)		
Elongation		
(ASTM D412)	350 %	30 %
Tensile Strength, MPa (psi)		
(ASTM D412)	6.0 (870)	-
(ASTM D638)	-	12.7 (1,840)
Water Absorption (by wt.)		
(ASTM D570)	-	0.1 %
Shore Hardness		
ASTM D2240	40 A	74 D
Tear Strength KN/m (pli)		
(ASTM D624)	12.7 (72.5)	-
Tensile Adhesion to Concrete, MPa (psi)		
(ASTM D4541)	3.5 (508)	-
Abrasion Resistance, mg loss		
(ASTM D4060, Taber, CS-17, 1000 cycles)	-	94
Impact Resistance	-	pass 160 in./lb.
Chemical Resistance:		

No effect from water, motor oils, gasoline, diesel, anti-freeze, alkalis, salts, and common household chemicals.

APPLICATION

Primer (Optional) Installation:

NOTE: The primer, ZeraPrime™ W-30, is usually only required when the concrete substrate is porous and/or to minimize outgassing.

The mixing equipment used to mix the ZeraPrime™ W-30 must be clean and free of any contaminants that may be present in the equipment from previously used products. Premix component “A” of ZeraPrime™ W-30 and Part “B” separately first to eliminate the possibility of settlement. Combine equal parts of Part A and Part B into a clean container and mix thoroughly for 2 minutes. Pour a workable amount of the mixed material into a paint tray and apply the primer evenly with a lint-free 6 mm nap roller over the entire floor. Allow to stand for a minimum of 4-5 hours @ 23° C (74°F) prior to proceeding with ZeraDeck™ 95 Membrane.

Membrane Installation:

The mixing equipment used to mix the ZeraDeck™ 95 Membrane must be clean and free of any contaminants that may be present in the equipment from previously used products. Mix component A first to eliminate the possibility of settlement. Pour all of the liquid from Part A and Part B into the mixing equipment. A ‘Jiffy Mixer’ or a mud mixer blade on a slow speed drill is the preferred method of mixing. Mix the blended components for a minimum of 2 minutes.

Apply ZeraDeck™ 95 Membrane to an even thickness using a notched squeegee and further level using a lint-free 5 mm nap roller (designed for epoxy and urethane) to achieve a total dry film thickness of 20 mils. Allow the membrane to cure overnight before applying the topcoat, ZeraDur™ 125.

Topcoat Installation:

The mixing equipment used to mix the ZeraDur™ 125 must be clean and free of any contaminants that may be present in the equipment from previously used products. Premix component “A” of ZeraDur™ 125 first to eliminate the possibility of settlement. Pour all of the liquid from Part B into Part A. Using a “Jiffy Mixer” or a mud mixer blade on a slow speed drill, mix the blended components for 2 minutes. Mix only the amount of material that can be properly installed within 20 minutes.

Apply the ZeraDur™ 125 with a lint free 5 mm nap roller (designed for epoxy and urethane) in a one coat application

over the cured ZeraDeck™ 95 Membrane surface to achieve a film thickness of 5 - 8 mils. If a non-slip finish is required, lightly seed the wet film with 50 mesh silica and back roll to encapsulate the aggregate into the coating. Alternatively Zeraus Anti-Slip additives can be added to provide a uniform non-slip finish. Allow the ZeraDur™ 125 to cure for a minimum of 12-16 hours @ 23° C (74° F) before subjecting it to foot traffic.

COVERAGE

ZeraPrime™ W-30 (Optional):

7.4 m²/litre (300 ft²/US gallon)
(2.6 mils dry film thickness)

ZeraDeck™ 95 Membrane:

1.9 m²/litre (76 ft²/U.S. gallon)
(20 mils dry film thickness)

ZeraDur™ 125:

4.9 - 7.9 m²/litre (200-320 ft²/US gallon)
(5 - 8 mils dry film thickness)

PACKAGING

ZeraPrime™ W-30:

3.79 litre (1 U.S. gal) units
37.8 litre (10 U.S. gal) units

ZeraDeck™ 95 Membrane:

18.9 litre (5 U.S. gal) units

ZeraDur™ 125:

3.79 litre (1 U.S. gal) units

NOTE: The ZeraDeck™ MRW System is designed for thin film thickness applications that require the floor surface to be relatively smooth and dry.

CLEAN UP

Clean all equipment and installation tools immediately with VOC compliant, low odour solvent, ZeraSolv™ (Glycol Ether PM).

STORAGE

Store in a heated warehouse. Do not freeze.

SHELF LIFE

Two years from the date of manufacture if kept in original unopened containers under normal heated warehouse conditions.

SAFETY PRECAUTIONS

Read Material Safety Data Sheet (MSDS) prior to use.

WARRANTY

“The recommendations made and the information herein is the result of accurate laboratory and field tests under controlled conditions. We guarantee that the quality and properties of the materials supplied conform to our standards. Zeraus Products Inc. makes no warranties, expressed or implied, as uses and applications are beyond our control. Zeraus Products Inc. shall not be liable for any injury, loss, or damage (direct or consequential) arising from use or inability to use the products. Before using, the user is urged to pre-test the products in his/her own environment to determine the suitability of the products for their intended use, and the user assumes all risk and liability whatsoever in connection therewith.

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