SYSTEM GUIDE

DEFENDERDECK™ MD

SYSTEM DESCRIPTION

DEFENDERDECK™ MD is a 2-component, hand-applied, polyurethane-based, high build resin system, designed to provide a corrosion and skid resistant system for medium duty vehicular traffic. Used in conjunction with abrasion and crush resistant aggregates, the system is high build and suitable for use in high traffic environments.

APPLICATIONS

- Pedestrian Bridges
- Marine
- Walkways, External Decks
- Car Decks
- Pontoons

BENEFITS

- Easy-to-use, fast curing hand-applied system
- No noxious odors or VOCs in Base or Top Coats
- Slip and abrasion-resistant surface

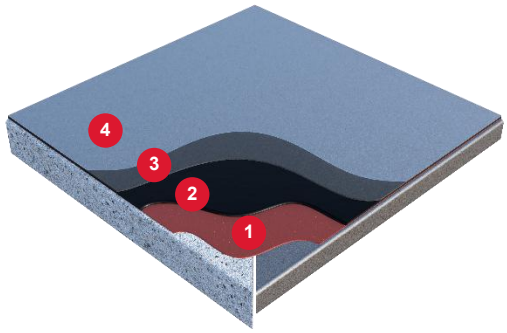
BASE COAT COLOR

Standard color is Black (Color Code “218”) or Tan (Color Code “750”).

TOP COAT COLOR

Standard color is Clear.

SYSTEM BUILD AND COMPONENTS



1. **Prime Coat:** FT-6069-N (steel) or FT-6160 (concrete)
2. **Resin Slurry:** FT-4350
3. **Aggregate Finish:** 16-30 or 12-20 Mesh Aggregate
4. **Sealcoat:** FT-4054 (per specification requirements)

COVERAGE RATES

Primer:

- Steel: 4 mils WFT
- Concrete: ~10 mils WFT

FT-4350: ~0.15 to 0.26 lbs./ft² *(approximately 40 mils)*

Aggregate:

- Aluminum Oxide: ~1 to 1.4 lbs./ft² residual
- Basalt: ~0.7 to 1 lbs./ft² residual

DEFENDERDECK™ MD

INSTALLATION OVERVIEW

Installation of Freedom Chemical Corporation's DefenderDeck Systems products should be performed by an applicator with documented experience and a quality assurance program.

Refer to the relevant documentation for complete mixing, handling, and installation information.

Project Conditions

Install system when air and substrate temperature meet the requirements of the contract documents or is between 40°F and 104°F, whichever is more stringent[1].

Do not install system if relative humidity is above 85%. Always check to ensure no moisture is present on the deck. Refer to Installation Procedure document for information regarding air/substrate temperature and dew point limitations.

Surface Preparation

Concrete Surfaces: Provide clean, dry, and sound concrete substrate. Repair spalls and other defects using approved patching materials. Prepare concrete surfaces in accordance with SSPC-SP13/NACE No. 6 and achieve a Concrete Surface Profile of at least 3 measured using ICRI CSP chips.

Metal Surfaces: Provide clean, dry, and sound metal substrate. Prepare metal surfaces in accordance with SSPC-SP10/NACE No. 2 and achieve a 4-6 mil blast profile measured using a Surface Profile Gauge.

Application of Products

Step 1 (Primer Coat):

- Steel: Thoroughly pre-mix/agitate primer before use as pigments can settle during transportation. Dispense primer onto paint tray and apply using a suitable quality roller at the recommended coverage rate of 400 ft² per gallon (~4 mils WFT). Allow primer to cure until tack-free prior to performing subsequent steps.
- Concrete: Thoroughly pre-mix/agitate primer before use as pigments can settle during transportation. Dispense primer onto deck and spread using a suitable quality squeegee and roller at the recommended coverage rate of approx. 150 ft² per gallon (~10 mils WFT). Allow primer to cure until tack-free prior to performing subsequent steps.

Step 2 (Resin): Pre-mix Part "B" (polyol) to disperse pigment and ensure a homogeneous uniform mix is achieved. Pour contents into a suitable mixing vessel. Add the Part "A" (curative) and mix for a minimum of 45 seconds using a slow speed, high torque drill with suitable paddle.

Dispense mixed material onto substrate and spread evenly at the prescribed rate (dependent upon aggregate selection) using a serrated squeegee (1/8-inch notch) and allow to self-level.

Step 3 (Aggregate): The selected aggregate (16-30 Mesh or 12-20 Mesh) should be placed adjacent to the work area. Bags should be open and ready for use. Fully "breach" the resin slurry after approximately 5-10 minutes. On steep gradient ramps, do not cast aggregate too soon to prevent the aggregate from "rolling" out of the system.

Step 4 (Sealcoat): A sealcoat is recommended for finer aggregate finishes where increased vehicular movements are anticipated. This will reduce/eliminate loss of aggregate in the final surface.

System Weights (Approximate Residual)

Resin & Aggregate	~1.6 to 2 lbs./ft²

Open to Vehicular Traffic

@ 50°F	8 hours
@ 68°F	4 hours
@ 86°F	3 hours

[1] Lower-temperature applications can be achieved through the use of low-temperature primer options and the FT-4350 accelerator pack. For specific guidance on material selection and temperature limitations, contact Freedom Chemical Corporation.