Dudick inc.

Corporate Offices
1818 Miller Parkway
Streetsboro, OH 44241
330-562-1970
330-562-7638 FAX
www.dudick.com

SHOCK-CRETE MD/SF

Semi-Self Leveling or Seeded Water Dispersed Polyurethane Floor Topping, 3/16" – 1/4"

FEATURES

Contributes toward satisfying credit for low emitting material under LEED 4.1

Meets California Department of Public Health CDPH/EHLB Standard Method Version 1.2 2017
Compliance Certificates Available Upon Request

Thermal Shock Resistant
Excellent Chemical Resistance
Low Odor
Fast Setting
Low Temperature Cure
USDA Compliant
100% Reactive
Anti-Microbial Agents are available as an option
Anti-Skid Version Available
Coefficient of Thermal Expansion
Similar to Concrete
VOC Compliant

RECOMMENDED APPLICATIONS

General Concrete Restoration
Breweries and Beverage Plants
Automotive Aisleways
Food Processing Plants
Meat Packaging Plants
Loading Ramps
Packing Plants
Machine Shops
Laboratories
Wet Wells

CHEMICAL RESISTANCE

Organic Acids
Dilute Inorganic Acids
Alkali Solutions
Salts
Oils
Aliphatic Solvents

TEMPERATURE LIMITS

-120ºF to 200ºF
100ºF – Continuous Chemical Exposure
200ºF – Occasional Steam Cleaning

COLORS: Light Grey, Medium Grey, Dark Grey, Beige, Tan, & Tile Red.

Consult Dudick, Inc. for additional colors.

PHYSICAL PROPERTIES

Coefficient of Thermal Expansion ASTM C531	1.7×10^{-5}
Compressive Strength ASTM C579	8,000 PSI
Modulus of Elasticity ASTM C580	2.2×10^{8} PSI
Tensile Strength ASTM C307	1,000 PSI
Flexural Strength ASTM C580	2,200 PSI
Taber Abrasion ASTM D4060*	70 mg
Tensile Bond Strength ASTM D7234	Cohesive Failure of Concrete
Density	127 lb/cu.ft
VOC ASTM D-3960	43 g/L

***** 1,000 gm CS-17 wheel @ 1,000 cycles

SPECIFICATIONS

Shock-Crete MD shall be a 3/16" – 1/4" thick, semi-self-leveling, aggregate filled, polyurethane floor topping. **Shock-Crete MD/SF** shall be a 3/16"-1/4" thick seeded polyurethane floor topping using a 20-40 mesh silica sand or aluminum oxide encapsulated with specified Sealer.

Both products are manufactured by Dudick, Inc. and applied in accordance with the manufacturer's recommendations.

SEALERS

For improved UV stability, abrasion, stain resistance and chemical resistance. A Sealer can be applied over **Shock-Crete MD/SF.**

***All Shock-Crete systems cure with pinholes in the surface. Contact Dudick for a pinhole free finish.**

SHOCK-CRETE MD/SF SYSTEMS

The Shock-Crete MD/SF systems can only be applied to concrete or a previous layer of Shock-Crete, Shock-Crete MD or Shock-Crete MD/SF. It will not bond to epoxy or other polymer systems.

THE SHOCK-CRETE MD SYSTEM

Shock-Crete MD: An aggregate filled system that develops a cure strength approximately 2 times that of the concrete base to which it is applied. The monolithic topping exhibits excellent physical and mechanical strength and chemical resistance.

THE SHOCK-CRETE MD/SF SYSTEM

Bodycoat: Same as for **Shock-Crete MD.**

Broadcast: Sand or aluminum oxide is used for anti-skid texture. Aluminum oxide provides additional chemical and abrasion resistance.

Sealer: See specified Sealer data sheets.

***SHOCK-CRETE MD/SF BODYCOAT PACKAGING**

Component A	8.35 lbs.
Component B	8 lbs.
Aggregate	61 lbs. 2 oz.
Color Pack	Pre-measured Amount

****Pre-measured units – Do Not Breakdown***

ESTIMATING QUANTITIES AND ORDER BILL OF MATERIAL

APPROXIMATE SQUARE FEET PER UNIT	
SHOCK-CRETE MD	
Shock-Crete MD	28 ft.² @ 1/4"
SHOCK-CRETE MD/SF	
Shock-Crete MD/SF	28 ft.² @ 1/4"
20/40 Mesh Sand	¼ - ½ lbs.
Aluminum Oxide	½ - 1 lbs.
Sealer	See specified Sealer data sheets

Quantities shown are for estimating purposes only. Actual field usage may vary.

SURFACE PREPARATION

Concrete: Concrete must be prepared mechanically to remove surface laitance. Oils, grease or other contaminant must be removed prior to surface preparation. Concrete must free of curing compounds and form release agents. Surface texture should be similar to 60-80 grit sandpaper or the visual standard, CSP-3 from the International Concrete Repair Institute. The prepared surface should have a nominal tensile strength of 250 PSI per ASTM D-4541.

All concrete substrates must be checked for moisture prior to product application using the Plastic Sheet Test, ASTM D-4263.

Additional surface preparation will be required if a 60-80 grit texture is not achieved and the surface laitance not completely removed with the first mechanical preparation procedure.

APPLICATION SPECIFICATIONS

Temperature of concrete substrate must be between 41ºF and 90ºF.

Relative humidity must not exceed 90%.

Substrate temperature must be 5ºF above the Dew Point.

Application of **Shock-Crete MD/SF** in direct sunlight may lead to blistering, pinholes, or wrinkling due to out-gassing of air in the concrete and high substrate temperatures. Shading or evening application may be required. Consult a Dudick representative.

POT LIFE AND CURE TIME			
Temperature	**Pot Life**	**Working Time**	**Cure Time**
50ºF	20 min	20 min	12-16 hrs
70ºF	15 min	10 min	6-8 hrs
90ºF	8-9 min	7 min	3-4 hrs

Do not attempt to store mixed material. Residual material should be properly disposed of at the end of each work period.

Recoat Time: Depending on temperature Shock-Crete MD/SF must be cured for 16-24 hours before coated. Material must be abraded prior to recoating with Shock-Crete MD if it has set longer than 48 hours.

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INSTALLATION SPECIFICATIONS

MIXING EQUIPMENT

When deciding on mixing equipment, keep in mind that Shock-Crete MD has a 10 minute working time at 70ºF.

A 10-15 gallon rotating drum container is recommended. It is portable and easy to clean. The stationary mixing paddle provides both radial and axial action, scraping both the side and bottom of the container a mortar mixer can be used as long as it contains blades for uniform mixing.

SHOCK–CRETE MD INSTALLATION

Mixing Sequence: Add Color Pack to Component A and thoroughly mixed to re-disperse any pigments or fillers that may have settled. Add the pre-measured **Component A** to the mixer followed by the addition of the pre-measured **Component B** and mix for one minute. Slowly add the aggregate and continue mixing until all of the aggregate has been totally wetted. **DO NOT REDUCE AGGREGATE. MIX FULL UNITS.**

APPLICATION

Bodycoat: Set the gauge rake to the desired thickness, then pour the mixed material and spread to the recommended thickness. After spreading the material, trowel to remove rake marks then roll with a spike roller to level and de-aerate. **Timing of batches is important so as to avoid cold joints in the floor.**

SHOCK-CRETE MD/SF INSTALLATION

Use the same mixing sequence, bodycoat application as for **Shock-Crete MD** and broadcast either 20-40 mesh sand or aluminum oxide into the wet bodycoat to complete saturation and allow to cure overnight. Once cured, remove excess sand or aluminum oxide with a broom or leg vacuuming.

Sealer: See specified Sealer data sheets.

CLEANING

Use **S-10 Cleaning Solvent, MEK or Acetone** to clean tools and equipment.

SHIPPING

Refer to Material Safety Data Sheets.

STORAGE

Warning: All Dudick products classified by DOT with either white, yellow or red labels must not be mixed or stored together as an explosive reaction may occur.

Store all products in a cool, dry area away from open flames, sparks or other hazards.
When stored in their original, unopened containers at 50°F-75°F, **Shock-Crete MD/SF** components will have a six-month shelf life. Storage in direct sunlight or excessive heat will reduce working time and shelf life.

SAFETY

M.S.D.S: Material Safety Data Sheets must always be read before using products. Shock-Crete MD/SF toppings are intended for application by experienced, professional personnel. Dudick, Inc. can supply supervision to help determine that the surface has been properly prepared, the ingredients correctly mixed, and the materials properly and safely applied. If **Shock-Crete MD/SF** toppings are to be applied by your own personnel or by a third party contractor, please be sure that they are aware of the following safety precautions:

- Fumes are flammable and heavier than air. Proper ventilation should be maintained to minimize breathing of concentrated fumes.
- Suitable respirators should be used during application.

- Safety glasses, gloves, and suitable protective clothing must be worn at all times during application.

- If contact with hardeners occurs, flush the skin with flowing water. **Shock-Crete MD/SF** liquid can be removed with **S-l0 Cleaning Solvent, Acetone, MEK, or lacquer thinner.**

- Keep open flames and sparks away from the area where materials are being mixed and applied.

- If a rash occurs, remove the individual from the work area and seek a physician's care for dermatitis.

- In case of eye contact, flush with water for at least 15 minutes and consult a physician.

- If swallowed, do not induce vomiting; call a physician immediately.

- Exposure to resins and hardeners through direct skin contact and/or inhalation may cause severe dermatitis reactions in some people.

NOTE: Dudick, Inc. ("Dudick") warrants all goods of its manufacture to be as represented in its catalogs and that the manufacture of its products by its employees or sub-contractors shall be performed in a workmanlike manner. Dudick's sole obligation under this warranty shall be to replace any material which its examination shall disclose to be defective. Dudick makes no warranty concerning the suitability of its product for application to any surface, it being understood that the goods have been selected and the application ordered by the Purchaser. DUDICK, INC. MAKES NO WARRANTY, EXPRESS OR IMPLIED, THAT THE GOODS SHALL BE MERCHANTABLE OR THAT THE GOODS ARE FIT FOR ANY PARTICULAR PURPOSE. THE WARRANTY OF REPAIR OR REPLACEMENT SET FORTH HEREIN IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES ARISING BY LAW OR OTHERWISE; AND DUDICK INC. SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING BUT NOT LIMITED TO LOST PROFITS, DOWN TIME, DAMAGES TO PROPERTY OF THE PURCHASER OR OTHER PERSONS, OR DAMAGES FOR WHICH THE PURCHASER MAY BE LIABLE TO OTHER PERSONS, WHETHER OR NOT OCCASIONED BY DUDICK'S NEGLIGENCE. This warranty shall not be extended, altered or varied except by written instrument signed by Dudick and Purchaser.

03/15/2021