



SHOCK-CRETE

Specifications

This document has been prepared to assist in the preparation of specifications for Dudick, Inc. **Shock-Crete System.** A trowel applied water dispersed polyurethane floor topping ¼” in thickness.

- This specification defines the recommended practices for surface preparation and application of Dudick, Inc. Shock-Crete.
- Application under this specification must be done in accordance with the standard installation procedures and manufacturer’s product literature.
- All questions regarding the selection, installation or intended end use should be directed to Dudick, Inc., Streetsboro, Ohio.

Any alterations from this specification due to unforeseen or unknown field conditions must be approved by Dudick, Inc.

Applicator of material must be approved by Dudick, Inc. prior to surface preparation and coating application.

APPLICABLE STANDARDS AND TEST METHODS

Shock-Crete System typical physical properties and test methods are provided in Dudick, Inc. Product Literature.

Compressive Strength ASTM C-579	7000-8000 PSI
Tensile Strength ASTM C-307	800-900 PSI (12-14MPa)
Taber Abrasion ASTM D-4060 CS-17 Wheel 1000 revolutions	70 mg.
Flexural Strength ASTM C-580	1800-2000 PSI (17-19MPa)
VOC ASTM D-3960	0
Tensile Bond Strength ASTM D 4541	Cohesive Failure of Concrete
Fungus Resistance U.S.Mil Std. 810E	No Growth
Coefficient of Thermal Expansion	

ASTM C-531	1.1×10^{-5}
Modulus of Elasticity	
ASTM C-579	1.7×10^{-5} PSI

PROJECT/SITE CONDITIONS

- Surface temperature, air temperature and material temperature should be between 50°F (10°C) and (90°C). These conditions are required for all parts of the application process of Dudick, Inc. Systems.
- Do not apply if the relative humidity is more than 90% or the surface temperature is less than 5% above the dew point of the air in the working area.
- Adequate ventilation is required during installation.

SYSTEM COMPONENTS

Materials for Dudick, Inc. Shock-Crete System include the following in unit packaging:

- Component A 5 lbs. 9 oz.
- Component B 4 lbs. 10 oz.
- Aggregate 48 lbs.
- Total Unit 58 lbs. (Approximately)
- Shock-Crete Unit covers 19-21ft.² per unit @ ¼" in thickness

INSPECTION

- Environmental and site conditions shall be documented as suitable for application and curing.
- Surface shall meet all acceptable conditions prior to proceeding.
- Any and all deficiencies shall be reported in writing.

SURFACE PREPARATION

- Surface must be free from all dirt, dust, grit, oil, sealers, concrete laitance and chemical contamination prior to applying Dudick, Inc. Shock-Crete System.
- Surface preparation shall be by abrasive blasting and/or mechanical abrasion providing a 40-60 mesh finish or the visual standard, CSP-5, from the International Concrete Repair Institute with exposed pea gravel. The prepared surface should have a nominal tensile strength of 250 psi per ASTM D-4541.

- Concrete must be inspected for bugholes, air pockets, pinholes, tie holes, from burrs, honeycombs and cracks prior to applying a Shock-Crete System.
- Shock-Crete must be allowed to fully cure prior to any traffic. No individuals shall be permitted in areas during application and until surface has cured. A minimum of 24 hours at 70°F is required prior to opening the floor system to traffic.
- Compliance with OSHA, EPA, State and Local regulations or applicable agencies is mandatory when using these products.
- Consult Dudick, Inc. Product Literature for additional surface preparation information.

FLOORING APPLICATION

- Prior to application of Shock-Crete all concrete substrates must be checked for moisture prior to product application using the Plastic Sheet Test ASTM D-4263.
- Concrete must be abrasive blasted so as to remove surface laitance and other contaminants. Concrete must be free of curing compounds and form release agents. Surface texture should be similar to 40-60 grit sandpaper with exposed pea gravel. The prepared concrete surface should have a nominal tensile strength of 250 psi per ASTM D-4541.
- Application of Shock-Crete in direct sunlight may lead to blistering, pinholes and/or wrinkling due to outgassing of air with concrete. Shading and/or even application may be required.
- This material must be chilled/cooled for application at 90°F or higher. Buckets of dry ice may be required for cooling. Shock-Crete has a 20-minute working time at 70°F.
- A 10-15 gallon rotating drum container is recommended. A mortar mixer can be used as long as it contains blades for uniform mixing.
- Component A should be thoroughly mixed to redisperse any pigments or fillers that may have settled. Add Component B and mix thoroughly for one minute. Slowly add the aggregate and continue mixing until all of the aggregate has been totally settled. Total mixing time should not exceed 3 minutes.
- Mixed material must be placed immediately. A bead of mixed material should be poured out and then trowelled to the approximate ¼" thickness specified. Keeping the trowel flat and using a large sweeping motion, the Shock-Crete will be finished, DO NOT OVERTROWEL.

CONTRACTORS QUALIFICATION

- The material manufacturer shall have a minimum of two years of experience with the successful contractor in the application of the specified floor system.
- The material manufacturer shall state, in writing, that the successful contractor has installed the existing floor system in an environment as outlined by the owner.

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