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MISCELLANEOUS

F-41 TDQ

TECHNICAL DATA SHEET

COMPONENTS	SOLIDS	VOC	MIX RATIO
3	100%	<50 g/l	0.5 gal A, 0.25 gal B, 50 lb. C

DESCRIPTION

F-41 TDQ combines our low viscosity, nonylphenol-free, clear, UV resistant epoxy resin, our UV resistant, cycloaliphatic amine curing agent and our Quartz Trowel Down Aggregate (PN 1321 L) to create the easiest troweling material available anywhere. This combination achieves an easily closed, decorative, epoxy mortar that can be walked on within a few hours. The cured material has high compressive strength (three times that of concrete), great impact resistance, excellent UV resistance and a broad range of resistance to chemical attack. It is virtually odor-free.

RECOMMENDED USES

F-41 TDQ is primarily used as a decorative, epoxy overlay to protect and/or repair concrete. Because it is a mortar, it is the ideal material for sloping floors and creating ramps and transitions. It can also be troweled vertically by skilled technicians to make cove base and stunning wall finishes.

LIMITATIONS

Each mix of F-41 TDQ will cover 28 sq. ft. at 1/4" theoretical coverage. A waste factor of 10-15% should be contemplated. Ideal application temperatures to be between 60-90°F. Cooler temperatures will increase cure times. Warmer temperatures will decrease working and cure times. Verify that substrate temperature is above 5 degrees of dewpoint during application and cure of material to avoid a potential amine blush.

SURFACE PREPARATION

The preparation method for each project is determined by a full understanding of the substrate to be coated, the chemistry of the coating system being used, the coating system thickness, and numerous other factors. The coating installer should fully read and understand ICRI Guideline NO. 310.2R-2013 and OSHA 29 CFR 1926.1153 before starting preparatory work. The aim, of preparing a substrate for coating applications, is to roughen the surface, remove weak layers, contaminants, dirt, debris and present a solid, clean, dry substrate for the primer. If unsure as to the level of preparation needed contact Polymer Nation at Lab@polymerNation.com.

MIXING

A mixture consists of 0.5 gal A, 0.25 gal B and 50 LB. of C (PN 1321 L). Combine part A and B into a single container, large enough to accept the entire kit (1 mix equals 4.47 gallons when Part C is added). Premix liquids at 350 RPM for 1 minutes using an appropriate mixing blade or mixing machine. Pour Part C into the mixed resin and continue mixing until a homogenous mortar is achieved (2-3 minutes usually).

APPLICATION

Pour material on floor and spread to desired thickness using a screed rake or pour material into a screed box. Follow using good hand or power trowel techniques. Recoat within 24 hours. Clean tools with a solvent similar to Xylene or Acetone.

COMPONENTS

Part A

Part B

Part C

GENERAL PRODUCT INFORMATION

Chemistry	Miscellaneous
Color / Finish	Receives its color once blended with PN 1321 L
Number of Components	3
Solids by Volume	100%
VOC (Mixed)	<50 g/l
Mix Ratio	0.5 gal A, 0.25 gal B, 50 lb. C
Mixed Viscosity	600-700 cP
Gel / Working Time	40-50 minutes
Application Temperature	60-90°F
Odor	Virtually odor-free

Each kit provides 4 mixes

25°C/77°F

The data below was gathered at temperatures of 72-75°F and 30-50% RH

PHYSICAL PROPERTIES

The data below was gathered at temperatures of 72-75°F and 30-50% RH

Hardness	D65 @ 24 hours / D85 @ 7 days	Shore D
Tensile Strength	2,870 psi	ASTM C307
Compressive Strength	15,200 psi	ASTM C579
Flexural Strength	5,000 psi	ASTM C580
Abrasion — Taber CS-17	0.083g Loss (when higher abrasion resistance is required the addition of PC 1336 to the coating should be included)	ASTM D4060
Impact Resistance	>160 inch pounds	ASTM D2794
Adhesion to Concrete	>450 Substrate failure	ASTM D7234
Gloss @ 60°	90+	
Color Scale	0.5-1.0	ASTM D1500
Accelerated Weathering	No yellowing	ASTM G154
Moisture Absorption	<.2 weight increase	ASTM C413
Coefficient of Thermal Lineal Expansion	24.5 x 10-6 in/in/F°	ASTM C531
Water Vapor Transmission	See ASTM D3010	ASTM D1653
Independent Certificate — Third-Party Testing	N/A	ASTM D3010
Adhesion	N/A	ASTM D3359
Adhesion to Steel	N/A	ASTM D4541
Hiding Power	N/A	ASTM D5150
Flammability When Adhered to Concrete	Self-Extinguishing	ASTM D635
Coefficient of Friction — Dry	0.75	NFSI B101.0
Coefficient of Friction — Wet	0.7	NFSI B101.1

ASTM D4060 — Abrasion Resistance CS17 1000 g 1000cycles in g Loss

Liquids only

Clear to slightly amber

CURE SCHEDULE

Dry to Touch	6-10 hours
Through Dry	10-12 hours
Dry to Light Use	16-24 hours
Full Cure	7 days

COVERAGE & PACKAGING

Coverage Rate	28 sq.ft./mix (4 mixes/kit)
Application Thickness	1/4"
Recoat Window	Within 24 hours
Packaging	3 gallon kit, 4 x 50 lb. bags of agg (4 mix kits)
Number of Mixes per Kit	Each kit provides 4 mixes

STORAGE, HANDLING & SAFETY

Store at 60-80 degrees F. Store material between 60-80 degrees F in a protected dry location. Refer to the current Safety Data Sheet (SDS) for this product before handling, mixing, or applying. Use appropriate personal protective equipment and ensure adequate ventilation during application and cure. Dispose of material, containers, solvents, etc., per Federal, State and local guidelines, rules and laws.

TEST DATA

Test data has been gathered from testing conducted by independent, internal and third party testing. The best way to compare coating performance is by head-to-head independent testing as this removes the numerous variables found between testing standards, equipment and testing agencies.

TYPICAL VALUES

The information here is general information to help our customers determine whether our products suit their specific applications. Our products are intended for sale to commercial and industrial customers. We require that customers inspect and test our products before use to satisfy themselves as to the content and suitability for the applications they intend to use our products. Nothing herein shall constitute any warranty expressed or implied, including any warranty of merchantability or fitness for a particular purpose, nor is any protection from any law or patent to be inferred. The exclusive remedy for all proven claims is the replacement of our materials, and we shall not be liable for incidental or consequential damages. Polymer Nation Chemical Company LLC, 405 Oakwood Ave. Waukegan, IL 60085. All rights reserved.