

## EPOXIES

# F-11 TD

## TECHNICAL DATA SHEET

### COMPONENTS

3

### SOLIDS

100%

### VOC

<50 g/l

### MIX RATIO

0.5 gal A, 0.25 gal B,  
45 lb. C

## DESCRIPTION

F-11 TD combines our clear, nonylphenol-free, epoxy resin, our blended cycloaliphatic curing agent and our Trowel Aggregate PN 1324 to create the easiest troweling material available anywhere. This combination achieves an easily closed, natural 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 and a broad range of resistance to chemical attack. It is virtually odor-free.

## RECOMMENDED USES

F-11 TD is primarily used as an economical, natural colored, fast setting 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 used to fill deep pits, cracks and voids in concrete floors and walls.

## LIMITATIONS

Each mix of F-11 TD will cover 23 sq. ft. at 1/4" theoretical coverage. A waste factor of 10-15% should be estimated. 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 F-11 TD Part A, 0.25 gal F-11 TD Part B and 45 LB. of Part C (PN 1324). Combine part A and B into a single container, large enough to accept the entire mix (1 mix equals 3.7 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               | Epoxies                         |
| Color / Finish          | Clear & Color Packs             |
| Number of Components    | 3                               |
| Solids by Volume        | 100%                            |
| VOC (Mixed)             | <50 g/l                         |
| Mix Ratio               | 0.5 gal A, 0.25 gal B, 45 lb. C |
| Mixed Viscosity         | 350-450 cP                      |
| Gel / Working Time      | 15-20 minutes                   |
| Application Temperature | 60-90°F                         |

Each kit provides 4 mixes

25°C/77°F (A&B)

Data gathered at temperatures of 72-75°F and 30-50% RH

## PHYSICAL PROPERTIES

|                                                      |                                                                                                                     |             |
|------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|-------------|
| <b>Hardness</b>                                      | D65 @ 24 hours / D78 @ 7 days                                                                                       | Shore D     |
| <b>Tensile Strength</b>                              | 2,870 psi                                                                                                           | ASTM C307   |
| <b>Compressive Strength</b>                          | 15,200 psi                                                                                                          | ASTM C579   |
| <b>Flexural Strength</b>                             | 5,000 psi                                                                                                           | ASTM C580   |
| <b>Abrasion – Taber CS-17</b>                        | 0.083g Loss (when higher abrasion resistance is required the addition of PC 1336 to the coating should be included) | ASTM D4060  |
| <b>Impact Resistance</b>                             | >160 inch pounds                                                                                                    | ASTM D2794  |
| <b>Adhesion to Concrete</b>                          | >450 Substrate failure                                                                                              | ASTM D7234  |
| <b>Gloss @ 60°</b>                                   | 25-30                                                                                                               |             |
| <b>Color Scale</b>                                   | 0.5-1.0                                                                                                             | ASTM D1500  |
| <b>Accelerated Weathering</b>                        | N/A                                                                                                                 | ASTM G154   |
| <b>Moisture Absorption</b>                           | <.2 weight increase                                                                                                 | ASTM C413   |
| <b>Coefficient of Thermal Lineal Expansion</b>       | 24.5 x 10 <sup>-6</sup> in/in/°F                                                                                    | ASTM C531   |
| <b>Water Vapor Transmission</b>                      | See ASTM D3010                                                                                                      | ASTM D1653  |
| <b>Independent Certificate – Third-Party Testing</b> | N/A                                                                                                                 | ASTM D3010  |
| <b>Adhesion</b>                                      | N/A                                                                                                                 | ASTM D3359  |
| <b>Adhesion to Steel</b>                             | N/A                                                                                                                 | ASTM D4541  |
| <b>Hiding Power</b>                                  | N/A                                                                                                                 | ASTM D5150  |
| <b>Flammability When Adhered to Concrete</b>         | Self-Extinguishing                                                                                                  | ASTM D635   |
| <b>Coefficient of Friction – Dry</b>                 | 0.75                                                                                                                | NFSI B101.0 |
| <b>Coefficient of Friction – Wet</b>                 | 0.7                                                                                                                 | NFSI B101.1 |

Liquids only

## CURE SCHEDULE

|                     |           |
|---------------------|-----------|
| <b>Dry to Touch</b> | 2-3 hours |
|---------------------|-----------|

|                    |           |
|--------------------|-----------|
| <b>Through Dry</b> | 3-5 hours |
|--------------------|-----------|

|                         |            |
|-------------------------|------------|
| <b>Dry to Light Use</b> | 8-12 hours |
|-------------------------|------------|

|                  |          |
|------------------|----------|
| <b>Full Cure</b> | 5-7 days |
|------------------|----------|

## COVERAGE & PACKAGING

|                      |               |
|----------------------|---------------|
| <b>Coverage Rate</b> | 23 sq.ft./mix |
|----------------------|---------------|

|                              |      |
|------------------------------|------|
| <b>Application Thickness</b> | 1/4" |
|------------------------------|------|

|                      |                        |
|----------------------|------------------------|
| <b>Recoat Window</b> | Recoat within 24 hours |
|----------------------|------------------------|

|                  |                                                |
|------------------|------------------------------------------------|
| <b>Packaging</b> | 3 gal kit, 4 x 45 lb. bags of agg (4 mix kits) |
|------------------|------------------------------------------------|

|                                |   |
|--------------------------------|---|
| <b>Number of Mixes per Kit</b> | 4 |
|--------------------------------|---|

## 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 guideline, 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.