

## URETHANE CONCRETE

# F-52 SL 36

## TECHNICAL DATA SHEET

### COMPONENTS

3

### SOLIDS

>97%

### VOC

<50 g/l

### MIX RATIO

1.05 gal A; 0.75 gal  
B; 36 lbs C

## DESCRIPTION

F-52 SL 36 is a revolutionary formulation that allows longer working time with a snap-cure. It combines our water-based urethane resin and aromatic hardener with our proprietary blend of portland cement, lime and fillers (PN 1352 S 36). It has been formulated to provide the highest degree of impact and thermal shock resistance of any urethane concrete on the market. It's low odor and easy application make it perfect for industrial and durable decorative applications.

## RECOMMENDED USES

F-52 SL 36 is most often used as a self-priming, slurry broadcast flooring system. It is used to achieve a 3/16" thickness in one pass or a nominal 1/4" when a decorative broadcast element is to be included. F-52 SL 36 can be used as a primer when concrete floors exhibit high moisture transmission levels. It can also be applied to green concrete.

## LIMITATIONS

Each mix pf F-52 SL 36 will cover 35 sq. ft. at 3/16" theoretical coverage. A waste factor of 5% should be contemplated when mixing and installing. Ideal application temperatures are between 50-80°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 1.05 gal. A, 0.75 gal B and 36 LB. of C (PN 1352 S 36). Combine part A and B into a single container, large enough to accept the entire kit (1 mix equals 4.4 gallons when Part C is added). Premix liquids at 350 RPM for 30-45 seconds using an appropriate mixing blade or mixing machine. Add Part C under agitation and mix for an additional 1-2 minutes.

## APPLICATION

Pour material on to floor and spread to desired thickness using a ½" notch steel creed rake. Immediately back roll with a 18" looped roller to release trapped air and promote leveling. Broadcast #1323 (00NN Sand) at a rate of .75lb/ft, evenly across the floor, following the same order in which the slurry was installed. Whenever possible, work the shorter distance not the longer as this will help keep a fresh edge and make for easier blending. Poor leveling is a symptom of spreading material too thin or porous concrete. Temperature should be descending, not ascending, during application and cure of slurry. This is critical whenever a broadcast will not be cast into the wet slurry. Recoat within 24 hours. Clean tools with a solvent similar to Denatured Alcohol or Acetone.

## COMPONENTS



Part A



Part B



Part C

## GENERAL PRODUCT INFORMATION

|                                |                                                              |
|--------------------------------|--------------------------------------------------------------|
| <b>Chemistry</b>               | Urethane Concrete                                            |
| <b>Color / Finish</b>          | Natural, Tile Red, Light Gray, Medium Gray, Dark Gray, Black |
| <b>Number of Components</b>    | 3                                                            |
| <b>Solids by Volume</b>        | >97%                                                         |
| <b>VOC (Mixed)</b>             | <50 g/l                                                      |
| <b>Mix Ratio</b>               | 1.05 gal A; 0.75 gal B; 36 lbs C                             |
| <b>Mixed Viscosity</b>         | 300 cP                                                       |
| <b>Gel / Working Time</b>      | 15-20 minutes                                                |
| <b>Application Temperature</b> | 50-80°F                                                      |
| <b>Odor</b>                    | Subtle                                                       |

By Kit

25°C/77°F (A&B)

Cooler temperatures will increase cure times. Warmer temperatures will decrease working and cure times.

## PHYSICAL PROPERTIES

|                                               |                                                                                                                     |             |
|-----------------------------------------------|---------------------------------------------------------------------------------------------------------------------|-------------|
| Hardness                                      | D70 @ 24 hours; D78 @ 7 days                                                                                        | Shore D     |
| Tensile Strength                              | 1,400 psi                                                                                                           | ASTM C307   |
| Compressive Strength                          | 8,000 psi                                                                                                           | ASTM C579   |
| Flexural Strength                             | 2,500 psi                                                                                                           | ASTM C580   |
| Abrasion – Taber CS-17                        | 0.030g 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 The addition of PC 1244 drastically improves performance                                           | ASTM D2794  |
| Adhesion to Concrete                          | >450 Substrate failure                                                                                              | ASTM D7234  |
| Gloss @ 60°                                   | 30-40                                                                                                               |             |
| Accelerated Weathering                        | Significant yellowing                                                                                               | ASTM G154   |
| Moisture Absorption                           | 0.04%                                                                                                               | ASTM C413   |
| Coefficient of Thermal Lineal Expansion       | 2 x 10 to the 5th                                                                                                   | ASTM C531   |
| Water Vapor Transmission                      | See ASTM D3010                                                                                                      | ASTM D1653  |
| Independent Certificate – Third-Party Testing | Breathable                                                                                                          | 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 |

## CURE SCHEDULE

|                  |             |
|------------------|-------------|
| Dry to Touch     | 2 hours     |
| Through Dry      | 4 hours     |
| Dry to Walk      | 6 hours     |
| Dry to Light Use | 16-24 hours |
| Full Cure        | 7 days      |

## COVERAGE & PACKAGING

|                         |                    |
|-------------------------|--------------------|
| Coverage Rate           | 28 – 35 sq.ft./kit |
| Application Thickness   | 3/16" – 1/4"       |
| Recoat Window           | Within 24 hours    |
| Packaging               | 1,262 Gallon kits  |
| Number of Mixes per Kit | 1                  |

## 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.