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POLYMER NATION CHEMICAL COMPANY, LLC

Setting the Standard



405 Oakwood Ave
Waukegan, IL 60085

847-774-5038 | www.polymernation.com | sales@polymernation.com

TECHNICAL DATA SHEET: SP-15 EPOXY PATCHING PASTE

Product Overview

SP-15 consist of a high viscosity, nonylphenol-free, epoxy resin, a thickened, cycloaliphatic amine reactant and a free-silica, powder (PN 1170). This combination, when properly mixed, achieves a non-shrinking patching paste with high compressive and tensile strength and which is easy to shape, sand and grind after initial cure.

Uses and Benefits

SP-15 is most often used to patch concrete holes, cracks, divots and non-moving joints. It can also be used when a feathered edge is required for smooth transitions between differing planes.

SP-15 kit will cover approximately 3.2 sq. ft. at 1/4" or 150 LF of 1/4" X 1/4" joint.

Limitations

SP-15 is designed to be applied at temperatures 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

It is always recommended to mix the entire kit, whenever possible, to avoid off-ratio mixtures. A mixture consists of 1 quart SP-15 Part A, 1 pint SP-15 Part B and 3 LB. of Part C (PN 1170). Combine part A and B into a single container, large enough to accept the entire kit (1 mix equals .5 gallons when Part C is added). Premix liquids at 350 RPM for 1 minute using an appropriate mixing blade, and slowly add Part C under agitation until desired paste consistency is achieved.

Application

Place mixed material on a mortar board and apply mixed material within 20 minutes using patching techniques. Recoat

within 5 hours. If after 5 hours, abrade material with a minimum of 100 grit sanding screens. Clean tools with a solvent similar to Xylene or Acetone.

Technical Data

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

| | |
|-------------------------|------------------------|
| Packaging | 0.5 Gallon kits |
| Mix Ratio by Volume | 2:1 plus Part C |
| Mixed Viscosity | 3500 cP 25°C/77°F |
| Gel Time | 20 minutes |
| Dry to Touch | 2.5 hours |
| Through Dry | 4 hours |
| Dry to Grind | 4 hours |
| Dry to Light Use | 6-8 hours |
| Full Cure | 7 days |
| Shore D Hardness | D65 @ 24 hours |
| Shore D Hardness | D81 @ 7 days |
| Gloss @ 60 Degree Angle | 30-40 |
| VOC's of Mixed Material | <50 g/l EPA Method 24 |
| Color Scale | 0.5-1.0 per ASTM D1500 |
| Solids by Volume Mixed | 100% |
| Application in Mils | N/A |
| Available Colors | Clear or Color Packs |

PHYSICAL PROPERTIES SP-15 EPOXY PATCHING PASTE

| Description | Standard | Results |
|---|-------------|---|
| Tensile Strength | ASTM C307 | 3,200 psi |
| Moisture Absorption | ASTM C413 | <.2 weight increase |
| Coefficient of Thermal Lineal Expansion | ASTM C531 | 24.5 x 10-6 in/in/F |
| Compressive Strength | ASTM C579 | 15,200 psi |
| Modulus of Elasticity | ASTM C580 | 1,300 psi |
| Flexural Strength | ASTM C580 | 5,000 psi |
| Water Vapor Transmission | ASTM D1653 | See ASTM D3010 |
| Impact Resistance | ASTM D2794 | >160 inch pounds |
| Independent Certificate from third party testing agency | ASTM D3010 | N/A |
| Adhesion | ASTM D3359 | N/A |
| Abrasion Resistance CS17 1000 g 1000cycles in g Loss | ASTM D4060 | 0.083g Loss (when higher abrasion resistance is required the addition of PC 1336 to the coating should be included) |
| Adhesion to Steel | ASTM D4541 | N/A |
| Hiding Power | ASTM D5150 | N/A |
| Flammability When Adhered to Concrete | ASTM D635 | Self-Extinguishing |
| Adhesion to Concrete | ASTM D7234 | >450 Substrate failure |
| Coefficient of Friction Dry Ave. three tests | NFSI B101.0 | 0.75 |
| Coefficient of Friction Wet Ave. three tests | NFSI B101.1 | 0.7 |
| Accelerated Weathering Testing | ASTM G154 | N/A |

* Dispose of material, containers, solvents, etc., per Federal, State and local guidelines, rules and laws.

* Store material between 60-80 degrees F in a protected dry location.

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.

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.

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