

## URETHANES

# U-20

## TECHNICAL DATA SHEET

### COMPONENTS

2

### SOLIDS

58%

### VOC

0 g/l

### MIX RATIO

4:1

## DESCRIPTION

U-20 is a breakthrough technology combining urethane and acrylic characteristics to create a unique, zero-VOC water-based topcoat. By combining our hybrid urethane/acrylic resin with our proprietary aliphatic hardener blend we are able to create a high-solids, pigmented finish that will not yellow, maintains its existing sheen and passes 2500 MEK double rubs! It is manufactured only in a gloss finish. If a satin finish is desired, see the data sheet for U-30 2K WB Satin Urethane.

## RECOMMENDED USES

U-20 is primarily used as a pigmented topcoat due to its unsurpassed UV, mar and abrasion resistance. It can be applied to floors and walls and adheres well to many substrates including concrete, gypsum, cement board, metals, vinyl, PVC and fiberglass. It can also be applied direct to concrete as a primer and topcoat.

## LIMITATIONS

U-20 is designed to be applied at 4-6 mils as a top coat on floors and walls. Allowing to puddle will have a negative effect on the finish. Ideal application temperatures to be between 60-90°F. Cooler temperatures and high humidity will increase cure times. Warmer temperatures and low humidity will decrease working and cure times. Verify that substrate temperature is 5 degrees above the dewpoint during application and cure of material to avoid a potential blush or condensation.

## 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.

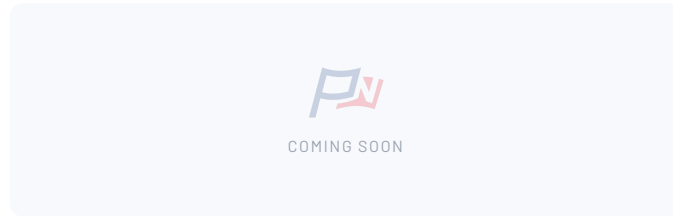
## MIXING

Combine all of part A and B into a single container, large enough to accept the entire kit. Mix at 350 RPM for 2-3 minutes using an appropriate mixing blade and making sure not to introduce excessive air into the solution (IF NEEDED, material can be thinned up to 10% with clean potable water).

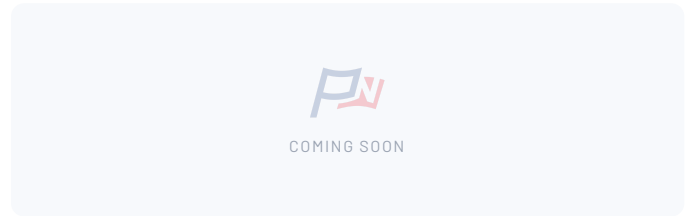
## APPLICATION

Pour material needed from the container onto the floor and spread with a 5-7 mil squeegee. Back roll perpendicular to evenly spread the material. Strike off the material in the same direction as material was squeegeed. Material can also be bucket-rolled using a 3/8" nap roller cover. For a non-skid finish add 288 grams per 3 gallon kit of PN 1337 S (1-12 oz cup struck off at the top) or 4 lbs. of PN 1335 A0 and stir to completely incorporate. Recoat within 24 hours. Clean tools with hot soapy water or solvent similar to Denatured Alcohol or Acetone.

## COMPONENTS



Part A



Part B

## GENERAL PRODUCT INFORMATION

|                         |                                                                                                                                                                                                 |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Chemistry               | Urethanes                                                                                                                                                                                       |
| Color / Finish          | REMOVE THIS FIELD — do not emit portalPn.finish at all (alternative: add "Gloss" to FINISH_OPTIONS in _data.ts line 191 first, after which "Gloss" becomes valid) · White, Light Gray, Warm Sun |
| Number of Components    | 2                                                                                                                                                                                               |
| Solids by Volume        | 58%                                                                                                                                                                                             |
| VOC (Mixed)             | 0 g/l                                                                                                                                                                                           |
| Mix Ratio               | 4:1                                                                                                                                                                                             |
| Mixed Viscosity         | 250-500 cP                                                                                                                                                                                      |
| Gel / Working Time      | 10-15 minutes                                                                                                                                                                                   |
| Application Temperature | 60-90°F                                                                                                                                                                                         |
| Odor                    | None                                                                                                                                                                                            |

It is always preferred to mix the entire kit, whenever possible, to avoid off-ratio mixtures

25°C/77°F. Warmer temperatures will reduce viscosity and lower temperatures will increase viscosity

Verify that substrate temperature is 5 degrees above the dewpoint during application and cure of material to avoid a potential blush or condensation.

## PHYSICAL PROPERTIES

|                                               |                                                                                                                      |                           |
|-----------------------------------------------|----------------------------------------------------------------------------------------------------------------------|---------------------------|
| Hardness                                      | 12 @ 24 hours / 46 @ 7 days                                                                                          | Pendulum Hardness (König) |
| Tensile Strength                              | 2,380 psi                                                                                                            | ASTM C307                 |
| Compressive Strength                          | N/A                                                                                                                  | ASTM C579                 |
| Flexural Strength                             | 3,550 psi                                                                                                            | ASTM C580                 |
| Abrasion – Taber CS-17                        | 0.014 g 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 psi Substrate failure                                                                                           | ASTM D7234                |
| Gloss @ 60°                                   | >90                                                                                                                  |                           |
| Color Scale                                   | 0.5-1.0                                                                                                              | ASTM D1500                |
| Accelerated Weathering                        | Non-yellowing                                                                                                        | ASTM G154                 |
| Moisture Absorption                           | <.17 weight increase                                                                                                 | ASTM C413                 |
| Coefficient of Thermal Lineal Expansion       | N/A                                                                                                                  | ASTM C531                 |
| Water Vapor Transmission                      | See ASTM D3010                                                                                                       | ASTM D1653                |
| Independent Certificate – Third-Party Testing | N/A                                                                                                                  | ASTM D3010                |
| Adhesion                                      | 5A                                                                                                                   | ASTM D3359                |
| Adhesion to Steel                             | >1,000 psi                                                                                                           | ASTM D4541                |
| Hiding Power                                  | N/A                                                                                                                  | ASTM D5150                |
| Flammability When Adhered to Concrete         | Self-Extinguishing                                                                                                   | ASTM D635                 |
| Coefficient of Friction – Dry                 | 0.72                                                                                                                 | NFSI B101.0               |
| Coefficient of Friction – Wet                 | 0.67                                                                                                                 | NFSI B101.1               |

## CURE SCHEDULE

|                  |             |
|------------------|-------------|
| Dry to Touch     | 2-4 hours   |
| Through Dry      | 6-10 hours  |
| Dry to Walk      | 12-16 hours |
| Dry to Light Use | 24 hours    |
| Full Cure        | 7 days      |

## COVERAGE & PACKAGING

|                       |                        |
|-----------------------|------------------------|
| Coverage Rate         | 275-400 sq.ft./gal.    |
| Application Thickness | 4-6 mils               |
| Recoat Window         | Within 24 hours        |
| Packaging             | 2.5, 5, 25 Gallon kits |

## 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.