



TECHNICAL DATA SHEET

UR 4401 WATER BASED TOPCOAT

PRODUCT NAME: UR 4401 WATER BASED TOPCOAT

MANUFACTURER: Penntek Industrial Coatings

STREET ADDRESS: 7850 Lakville BLVD

CITY, STATE, ZIP: Lakeville, MN 55044

INFORMATION PHONE: 724-483-9300

EMERGENCY PHONE: INFOTRAC 800-535-5053

PREPARED BY: Kyle Baynes

DATE REVISED: 9/3/21

DESCRIPTION

UR-4401 is a two component low-gloss aliphatic polyurethane water based floor sealer that exhibits excellent characteristics for abrasion resistance, chemical resistance, flexibility, weathering, and UV stability.

RECOMMENDED USE

Recommended for auto service centers, warehouses, computer rooms, laboratories, aircraft hangars, cafeterias and chemical exposure areas.

ADVANTAGES

Penetrates and seals the surface, leaving a smooth, pinhole and bubble-free coating. Excellent adhesion to a variety of substrates. Good physical properties.

PACKAGING

15-GALLON KIT:

15 gallon kit = 10 gallons part A and 5 gallons part B

MIX RATIO 2A : 1B (TWO PART A TO ONE PART B)

PRODUCT STORAGE:

Store product between 60 and 90 degrees F Have material at room temperature before using. Do not freeze.



TECHNICAL DATA SHEET

UR 4401 WATER BASED TOPCOAT

SURFACE PREPARATION

Surface preparation will vary according to the type of complete system to be applied. For a one or two coat thin build system (3-10 mils dry) we recommend either mechanical scarification or acid etching until a suitable profile is achieved. For a complete system build higher than 10 mils dry, we recommend a fine brush blast (shot blast). All dirt, oil, dust, foreign contaminants and laitance must be removed to assure a trouble free bond to the substrate. A test should be made to determine that the concrete is dry; this can be done by placing a 4'X4' plastic sheet on the substrate and taping down the edges. If after 24 hours, the substrate is still dry below the plastic sheet, then the substrate is dry enough to start coating. The plastic sheet testing is also a good method to determine if any hydrostatic pressure problems exist that may later cause disbonding.

MIXING

It is important to have material at 60-90F before using. This product has a two to one mix ratio by volume- merely mix two gallons of part A with 1 gallon of part B. After the two parts are combined, mix well with slow speed mixing equipment such as a jiffy mixer until the material is thoroughly mixed and streak free. Avoid whipping air into the coating. Improper mixing may result in product failure.

APPLICATION

Always apply a test area to become familiar with product before use and to determine suitability. The mixed material can be applied by brush or roller. Maintain temperatures within the recommended ranges during the application and curing process. Properly prime the substrate. It is best to maintain a wet edge to avoid roller marks. Direct sunlight or high temperatures may cause visible roller marking during application. Uneven application thicknesses may cause variations in gloss or roller marks, therefore apply material as evenly in thickness as possible. Too thick of an application may result in solvent entrapment and product failure. Although the pot life may appear to be longer, do not apply after one hour after the two components have been mixed. Once mixed, air exposure might cause a slight skinning on the surface in the roller pan or container if left uncovered, even for a few minutes. If skinning occurs, remove the thin layer, then stir and continue to use the product for up to an hour after it has been mixed. Variations in thickness may result in visible roller marks. Material left unused in the mixing pail or application tray may expand and foam up after an extended period of time.



TECHNICAL DATA SHEET

UR 4401 WATER BASED TOPCOAT

TECHNICAL DATA

SOLIDS BY WEIGHT:

Mixed = 60%

SOLIDS BY VOLUME:

Mixed= 55%

STANDARD COLORS:

CLEAR

RECOMMENDED FILM THICKNESS:

3-5 mils per coat wet thickness (Do not apply thicker)

COVERAGE PER GALLON:

320 to 500 square feet @ 3-5 mils wet thickness

PACKAGING INFORMATION

15 gallon kit = 10 gallons part A and 5 gallons part B

MIX RATIO:

2 parts A to 1 part B by volume

SHELF LIFE:

3 months in unopened containers

FINISH CHARACTERISTICS:

low-gloss (<20 at 60 degrees @ glossmeter)

ABRASION RESISTANCE:

Taber abrasor CS-17 calibrase wheel with 1000 gram total load and 500 cycles= 23.0 mg loss

IMPACT RESISTANCE:

Gardner Impact, direct & reverse=160 in lb (passed)

FLEXIBILITY:

No cracks on a 1/8" mandrel

ADHESION:

>300 psi @ elcometer (concrete failure, no delamination) over suitable primer

VISCOSITY:

Mixed= 450-650 cps (typical)

DOT CLASSIFICATIONS:

Part A "Not regulated"

Part B "Not regulated"



TECHNICAL DATA SHEET

UR 4401 WATER BASED TOPCOAT

TECHNICAL DATA

CURE SCHEDULE: (70F)

pot life - 1 gallon volume Minimum 1 hour

tack free (dry to touch)..... 7-9 hours

recoat or topcoat..... 8-12 hours

light foot traffic..... 24 hours

full cure (heavy traffic)...3-5 days

APPLICATION TEMPERATURE:

60-90 degrees F with relative humidity between 50% and 90%

CHEMICAL RESISTANCE:

REAGENT	RATING
acetic acid 5%	C
xylene	D
mek	B
gasoline	D
10% sodium hydroxide	E
50% sodium hydroxide	D
10% sulfuric	D
10% hydrochloric acid	D
20% nitric acid	C
ethylene glycol	D

Rating key: A - not recommended, B - 2 hour term splash spill, C - 8 hour term splash spill, D - 72 hour immersion, E - long term immersion. NOTE: extensive chemical resistance information is available through your sales representative

PRIMER:

None required

TOPCOAT:

Optional - Many products are suitable as topcoats including multiple coats of this product. For added chemical resistance, color stability or UV stability, topcoat with a suitable aliphatic urethane.



TECHNICAL DATA SHEET

UR 4401 WATER BASED TOPCOAT

RECOAT OR TOPCOATING

Multiple coats of this product are acceptable. If you opt to recoat this product, you must first be sure that all of the volatile components have evaporated from the coating during the curing process. The information on the front side are reliable guidelines to follow. However, it is best to test the coating before recoating or topcoating. This can be done by pressing on the coating with your thumb to verify that no fingerprint impression is left. If no impression is created, then the recoat can be started. Always remember that colder temperatures will require more cure time for the product before recoating can commence. Before recoating or topcoating, check the coating to insure no contaminants exist. If a blush or contaminants are present on a previous coat, remove with a standard type detergent cleaner and allow to completely dry. When recoating this product with subsequent coats of the urethane, it is advisable to apply the recoat before 24 hours passes. Also, it is advisable to degloss the previous coat to insure a trouble free bond.

CLEANUP:

Use soap and water or a water soluble solvent before the coating dries.

FLOOR CLEANING:

Caution! Some cleaners may affect the color of the floor installed. Test each cleaner in a small area, utilizing your cleaning technique. If no ill effects are noted, you can continue to clean with the product and process tested.

RESTRICTIONS:

Restrict the use of the floor to light traffic and non-harsh chemicals until the coating is fully cured (see technical data under full cure). It is best to let the floor remain dry for the full cure cycle. Dependent on actual complete system application, surface may be slippery, especially when wet or contaminated; keep surface clean and dry.