PC 4600

Polyaspartic Resin
2 Component Product

Technical Data Sheet

PRODUCT DESCRIPTION

PC 4600 is a two-component Polyaspartic urethane coating system that exhibits fast cure time, high solids, low-viscosity, high strength, UV resistant, reduced odor, and no VOC. PC 4600 has an extended working time and usable pot-life especially in elevated temperatures and humid conditions.

SUGGESTED USES

Use as a topcoat sealer, particularly when reduced odor, fast cure times, and UV resistance are necessary.

HIGHLIGHTS

- Resists a very wide range of organic and inorganic chemicals
- Rapid return to service
- Superior mechanical resistance
- Excellent UV resistance
- Outstanding aesthetic finish
- Low maintenance
- 100% Solids
- Very low odor

SHELF LIFE AND STORAGE

- 1 year from date of manufacture (un-opened)
- Materials should be stored in un-opened containers between 40°F (4°C) and 78°F (26°C)
- Condition product between 65°F – 85°F (18°C – 30°C) before using

PACKAGING

- Mix ratio 2 : 1 by volume
- PC 4600 Part A is sold in 5-gallon pails
- PC 4600 Part B is sold in 5-gallon pails

LIMITATIONS

Measurement and confirmation is needed for the following components prior to application:

- Substrate Moisture Content
- Ambient Relative Humidity
- Ambient and Surface Temperature
- Dew Point

During installation, confirm and record above values at least once every 3 hours, or more often whenever conditions change (e.g. Ambient Temperature increase/decrease, RH rise/fall, etc.).

Properties*	Value	Test Method
Mixed Viscosity	+/- 665 cps	ASTM D2196
Abrasion Resistance CS-17 wheel, 1000 cycles/1000gm load	60 mg loss	ASTM D4060
Tensile Strength	8,000 psi	ASTM D412
Adhesion to Concrete	>400 psi (2.7 MPa) 100% concrete failure	ASTM D4541
Shore D Hardness	85-90	ASTM D2240
Working Time	18 – 20 mins	

*Properties and results are based on laboratory testing at 72°F (22°C) %50 RH, theoretical calculations and estimates. Typical properties, as stated, are to be considered as representative of current production and should not be treated as specifications.

CHEMICAL RESISTANCE

Consult specialists at Coating & Binding Technology for specific requirements.

INSPECTION AND APPLICATION

Follow precautions and instructions prior to installation.

READ SAFETY DATA SHEET FOR SAFETY AND PRECAUTIONS. USE PRODUCT AS DIRECTED FOR INDUSTRIAL USE ONLY. KEEP OUT OF REACH OF CHILDREN.

APPLICATION EQUIPMENT

- Use equipment/clothing as called for in Safety Data Sheet Jiffy® Mixer Blade model ES
- Clean container for mixing material
- Low speed high torque drill motor - 300 to 500 rpm
- High quality short nap roller covers- $^{1}/_{4} - {}^{3}/_{8}$" nap
- Application Squeegee

SUBSTRATE

Mixing and Application must adhere to Material, Ambient and Substrate temperatures listed below or a decrease in product workability and slower cure rates will occur.

TEMPERATURE AND HUMIDITY	
Substrate	Between 50°F min and 85°F max. (4°C min., 30°C max.) At least 5˚F (3˚C) above measured Dew Point
Ambient Air Temperature	Minimum between 50°F (10°C) and 85°F (30°C)
Surface Temperature	Minimum between 50°F (10°C) and 85°F (30°C)
Precondition Material	At least 24 hours between 65° to 75°F (18° to 24°C)
Relative Humidity (RH)	Limited to 30-75% (during application and curing)
Low Relative Ambient Humidity may result in slower cure.	

Beware of condensation! DO NOT apply coatings unless the surface temperature is more than 5°F over dew point. This will reduce the risk of condensation, which may lead to adhesion failure or "blushing" on the floor finish. Be aware that the substrate temperature may be lower than the ambient temperature.

POT LIFE

Material Temperature	Time
+ 50°F (10°C)	40 minutes
+ 68°F (20°C)	30 minutes
+ 86°F (30°C)	20 minutes

PREPARATION

Surface must be clean, structurally sound, and dry. Remove contaminants, such as but not limited to, dust, laitance, grease, curing compounds, bond inhibiting impregnations, waxes. All projections, rough spots, etc. should be removed to achieve a level surface prior to the application. Concrete should be cleaned and prepared to achieve a laitance-free and contaminant-free, open textured surface by shot blasting or equivalent mechanical means (CSP-3 to CSP-4 as per ICRI guidelines). Sweep and vacuum any remaining dirt and dust with a wet/dry vacuum. Removing residual dust will help ensure a tenacious bond between the primer and substrate. Whenever "shot-blasting" is utilized, be careful to leave concrete with a uniform texture. "Over-blasting" will result in reduced coverage rates of the primer and/ or subsequent topcoats. The "shotblast" pattern may show through the last coat, known as "tracking". The compressive strength of the concrete substrate should be at least 3,500 psi (24 MPa) at 28 days and at least 250 psi (1.7 MPa) in tension at the time of application. For other substrates, please contact Coating & Binding Technology's Technical Services.

MIXING

Do not hand mix Coating and Binding technology's materials. Mechanically mix only. Do not thin this product. Addition of thinners (e.g. water, solvent, etc.) will slow cure and reduce ultimate properties of this product. Use of thinners will void any applicable Coating and Binding Technology warranty. Premix each Component separately. Empty Component B (Hardener) in the correct mix ratio into Component A (Resin). Mix the combined components for at least 3 minutes using a low speed drill (300 - 500 rpm) and Jiffy style mixer suited to the volume of the mixing container to minimize entrapped air. Be careful not to introduce any air bubbles while mixing. Make sure the contents are completely mixed to avoid any weak or partially cured spots in the coating. During the mixing operation, scrape down the sides and bottom of the container with a flat or straight edge trowel at least once to ensure complete mixing.

APPLICATION

Squeegee and back roll PC 4600 to provide a uniform coverage without ponding at a thickness of greater than 20 mils (80 ft^2/gal). If required, repeat this procedure for a second coat.

RECOAT

Before applying a second coat of PC 4600, wait a minimum of 90 minutes to a maximum of 24 hours with the ambient and substrate temperature at +68°F (20°C).

CURING

Allow coating to cure for a minimum of 4 hours after application (for foot traffic only), 8 hours after application (for light traffic only), with the ambient and substrate temperature at +68°F (20°C) before use. Full coating properties may take up to 5 days to develop.

TECHNICAL SUPPORT

Contact Coating and Binding Technology's technical support.

DISPOSAL

Dispose in accordance with federal, state, and local regulations.

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MAINTENANCE GUIDELINES

Allow floor coating to cure at least one week before cleaning by mechanical means (IE: sweeper, scrubber, disc buffer).

CARE

Increased life of the floor will be seen with proper maintenance and will help maintain a fresh appearance of your new CBT floor. Regularly sweep to avoid ground in dirt and grit which can quickly dull the finish, decreasing the life of the coating. Spills should be removed quickly as certain chemicals may stain and can permanently damage the finish. Only soft nylon brushes or white pads should be used on your new floor coating. Premature loss of gloss can be caused by hard abrasive bristle Polypropylene (Tynex®) brushes.

CAUTION

Heavy objects dragged across the surface will scratch all floor coatings. Avoid gouging or scratching the surface. Pointed items or heavy items dropped on the floor may cause chipping or concrete pop out damage. **Repair gouges, chip outs, and scratches as soon as possible to prevent moisture and chemical under cutting and permanent damage to the floor coating.** Plasticizer migration from rubber tires can permanently stain the floor coating. If a rubber tire is planned to set on the floor for a long period of time, place a piece of acrylic sheet between the tire and the floor to prevent tire staining. Rubber burns from quick stops and starts from lift trucks can heat the coating to its softening point causing permanent damage and marking.

WARRANTY AND CONDITIONS OF USAGE

WARRANTY AND LIMITATION OF LIABILITY

CBT warrants for a period of one (1) year that its products will be free of manufacturing defects and will be in conformity with published specifications when handled, stored, mixed, and applied in accordance with recommendations of CBT. If any product fails to meet this warranty, the liability of CBT will be limited to replacement of any non-conforming material if written notice containing full details of the non-conformity is given to CBT within (1) one year of delivery of materials. CBT may in its discretion refund the price received by CBT in lieu of replacing the material. CBT does not authorize anyone on its behalf to make any written or oral statements which in any way alter CBT's warranty or installation and storage information or instructions in its product literature or on its packaging labels.

CBT reserves the right to inspect the non-conforming material prior to replacement. CBT MAKES NO WARRANTIES, IMPLIED OR OTHERWISE, AS TO THE MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSES OF ITS PRODUCTS AND EXCLUDES AND DISCLAIMS THE SAME, INCLUDING, WITHOUT LIMITATION, FAILURE OF THE PRODUCT DUE TO ACTS OF GOD, FLOODING, EXTREME OR ABNORMAL TEMPERATURES, HUMIDITY AND MOSITURE, STRUCTURAL CONDITIONS, SITE PREPARATION AND CONDITIONS, ACCIDENTS, DAMAGE CAUSED BY INSTALLATION OF MACHINERY, EQUIPMENT OR FIXTURES WITHOUT ADEQUATE FLOOR PROTECTION OR WITHOUT ADEQUATE TIME FOR CURING, FAILURE TO COMPLY WITH CONDITIONS OF USAGE, VANDALISM, NEGLIGENT OR INTENTIONAL ACTS OF THIRD PARTIES OR OTHER CASUALTIES. Any installation of CBT products which fails to conform to such installation instructions or the “Conditions of Usage” shall void this warranty.

CONDITIONS OF USAGE

Installation of all products purchased must be by professional installers periodically published by CBT or otherwise approved by CBT in writing. Modification to any of CBT’s products voids the warranty. The installer shall maintain a written contemporaneous record of field conditions (including, without limitation, surface and atmospheric conditions, usage rates, and lot numbers of products installed). CBT reserves the right of inspection of any in- stalled product, installation and maintenance records and records of field conditions and may conduct additional testing as is reason- ably required to investigate any warranty claims. Warranty shall only apply for products or materials that have been paid for in full. Moisture Vapor Transmission (MVT) and ASR (Alkali Silica Re- action) Disclaimer and Exclusion: Although rare, some floors at or below grade level are sometimes subjected to saturation by moisture from beneath the concrete floor slab. This moisture can travel through the concrete and collect between floor toppings creating the potential for delaminating from hydrostatic pressure and or ASR. Conditions contributing to this include heavy rainfall, excess hydration within fresh concrete, and other factors or defective and old concrete. These factors are difficult, if not impossible to predict. CBT recommends testing for MVT and/or the presence of ASR in the concrete substrate prior to applying any polymer floor topping. The recommended test method for MVT is ASTM F 2170-11. ASR can be predicted by a higher than normal pH within the concrete. If high pH should be detected, it is recommended a lab test for ASR. If and when delamination of the floor occurs because of a moisture condition that exists beneath or in the concrete slab beyond the capacity of the individual product in- stalled or failure of the concrete due to ASR, this Limited Warranty does not extend to such delaminating or topping failure. This writing constitutes the sole and only agreement of warranty relating to CBT products.