

POWDER : CARBOSIL

TECHNICAL DATA SHEET

DESCRIPTION

POWDER is a two-component, **slow curing, no odor**, hybrid polyaspartic coating system designed as a decorative yet durable coating for commercial and industrial flooring. Formulated with aliphatic chemistry, POWDER is color stable allowing it to take UV exposure without color shifts seen with other coating systems such as epoxies. POWDER is a 1:1 mix ratio system with sufficient pot life to be rolled, brushed, or sprayed. It has a robust application window with ability to apply at low temperatures and high humidity.

PRIMARY APPLICATIONS

- Marine protection for fiberglass, steel, concrete or wood
- UV-stable top coat
- Aircraft hangar floors
- Low temperature equipment
- Maintenance facilities
- Offshore platforms
- Industrial shop floors
- Car washes or wash bays
- Secondary Containment
- Cooling towers
- Bridges
- Wastewater treatment applications

ADVANTAGES

- Lower odor than most polyaspartics
- Cures at temperatures just above freezing
- Can be applied below -20°F (-28.9°C). Will cure with special handling
- Excellent UV resistance, non yellowing and high gloss characteristics
- Excellent color stability
- Achieve a variety of colors, patterns, and logos, using decorative flakes, particles, or signs
- Excellent abrasion and impact resistance
- Available in low VOC and also in zero VOC formulation for restricted areas such as Southern California
- Micro media traction agents can be introduced into the liquid system or dispersed into the top coat
- Excellent chemical resistance, resistant to skydrol
- Resistant to hot tire peel
- Excellent coefficient of friction properties
- High build capability in lifts of 10 – 12 mils maximum
- Can be matted with a matting agent
- Bonds to virtually all substrates of any dimension, including metals, concrete, and fiberglass
- Tolerant to 300°F (149°C) for random, incidental heat contact
- VOC compliant in all 50 States and Canada

TECHNICAL DATA

PACKAGING	2 US gal (7.57 L)	
COLOR	Upon request	
RECOMMENDED THICKNESS	PRIMER	FINISH COAT
	8 mils (200 ft ² /gal)	- Over solid color : 6 mils (266 ft ² /gal) - Over vinyl chips : 12 mils (140 ft ² /gal)
SHELF LIFE	12 months in original unopened factory sealed containers. Keep away from extreme cold, heat or moisture. Keep out of direct sunlight and away from fire hazards.	
MIX RATIO, BY VOLUME	A:B = 1:1	
MIX RATIO, BY WEIGHT	A:B = 100:110	
POT LIFE 16 OZ (454 G)	20 minutes @ 77°F (25°C)	

PROPERTIES @ 73°F (23°C) AND 50% R.H.

* Times are approximate and will be affected by changing ambient conditions, especially changes in temperature and relative humidity.

* The indicated mileage is calculated for flat surfaces. A porous or imperfect surface will require more material in order to cover the same mileage. *

	PART A	PART B	MIX
SOLIDS CONTENT, BY VOLUME - CLEAR	93%	78%	85%
SOLIDS CONTENT, BY WEIGHT - CLEAR	92%	75%	83%
DENSITY (KG/L)	1.06	1.15	1.11
THINNER RECOMMENDED	Xylene		
DRYING TIMES			
TACK-FREE	1 - 2 hours		
RECOAT TIME	2 hours		
FOOT TRAFFIC	2 - 4 hours		
HEAVY EQUIPMENT TRAFFIC	24 hours		
FULL CURE	4 - 7 days		
ABRASION RESISTANCE, ASTM D4060 TABER ABRASER CS-17 WHEEL / 1000G (2.2 LBS) / 1000 CYCLES	9 mg loss		
ADHESION, ASTM D4541	Concrete-primer : > 550 psi (substrate ruptures)		
WATER ABSORPTION, ASTM D570	0.2 %		
WATER VAPOUR TRANSMISSION, ASTM E96	Water procedure B Film 0.01cm (0.004") : 1 perm		
HARDNESS (SHORE D), ASTM D2240	57 - 60		
FLEXIBILITY, 1/8" MANDREL, ASTM D1737	Pass		
FALLING SAND ABRASION RESISTANCE (L SAND/ 1 DRY MIL), ASTM D968	45		
	PART A	PART B	MIX
VISCOSITY @ 77°F (25°C)	350 - 450 CPS	75 - 100 CPS	125 - 225 CPS
GLOSS, ASTM D523	95+		

FIRE RATING CAN/ULC S102	Estimated on similar coating
FLAME SPREAD	5
SMOKE DEVELOPED	94
TENSILE STRENGTH, ASTM D638	6500-7500 psi
COMPRESSIVE STRENGTH (PSI MPA), ASTM D695	9500
*W/QUARTZ	13700
*W/CHIPS	12200
ELONGATION AT BREAK, ASTM D638	100%
TEAR STRENGTH (PLI), ASTM D2240	350
VOC	120.8 g/L

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SURFACE PREPARATION

Old concrete

Concrete surface must be cleaned. BLASTRAC, sand blasting, diamond grinder w/30 grit or coarse, or water blasting is highly recommended to remove surface contaminants. Any oils and fats must be removed prior to product application. Acid etching may be required (followed by a thorough rinsing) to open the pores of the concrete to accept a primer. Do not apply to wet substrates. Chloride, moisture, and pH levels should be checked prior to application. In almost every application a primer is recommended prior to use of POWDER.

New concrete

The concrete should be allowed to cure for a minimum of 30 days. Compression resistance of concrete must be at least 25 MPa (3625 lb/inch²) after 28 days and traction resistance must be at least 1,5 MPa (218 lb/in²). BLASTRAC, sand blasting, diamond grinder w/30 grit or coarser or acid etching (followed by a thorough rinsing) is required to remove the surface laitance that appeared during the curing process. A primer should be used to reduce out-gassing and promote adhesion.

MIXING

For the base coat, Mix part A and part B in equal parts (1:1). Using a clean and dry mixing pail, mix 1 gallon of part A and 1 gallon of part B with 500 ml of desired pigment. Stir gently; avoid over-mixing or creating a vortex that could introduce moisture. Do not mix below the dew point, which will shorten the pot life. No induction time similar to epoxy mixtures is required prior to use. If media agents are to be incorporated, they are to be added after thoroughly mixing A and B. Warning: Large masses of mixed and/or heated material will have a shorter pot-life. Do not apply in direct sunlight when temperatures and humidity are high.

APPLICATION

Roller application is the recommended process. Ideally the roller should be an 18" industrial grade phenolic resin core with a synthetic nap or lambs-wool cover 1/8" – 3/8" nap. Small chip brushes or 6 – 8" wall edgers may be used along the perimeter and in more difficult to reach areas. Avoid creating puddles.

CLEANING

Clean all application equipment with a specified cleaner. Once the material hardens it can only be removed mechanically. If the product splatters, wash thoroughly with hot soapy water.

OVERLAPS

Subsequent overlaps must be applied when primer is still wet or tacky. If primer has dried, reprime. Porous substrates may require multiple priming.

SUGGESTIONS

Sprinkle the primed area lightly with aggregate to provide better footing.

RESTRICTIONS

- Minimum/Maximum temperature of substrate: 42°F / 86°F (5°C / 30°C)
- Maximum relative humidity during application and curing: 85 %
- Substrate temperature must be 5.5°F (3°C) above dew point measured
- Humidity content of substrate must be < 4 % when coating is applied
- Do not apply on porous surfaces where a transfer of humidity may occur during application
- Protect from humidity, condensation and contact with water during the 24 hour initial curing period

HEALTH AND SAFETY

In case of skin contact, wash with water and soap. In case of eye contact, immediately rinse with water for at least 15 minutes. Consult with a doctor. For respiratory problems, transport victim to fresh air. Remove contaminated clothes and clean before reuse. For more information, consult the material safety data sheet.

Components A and B contain toxic ingredients. Prolonged contact of this product with the skin is susceptible to provoke an irritation. Avoid eye contact. Contact with may cause serious burns. Avoid breathing vapors release from this product. This product is a strong sensitizer. Wear safety glasses and chemical resistant gloves. A breathing apparatus filtering organic vapors approved by the NIOSH/MSHA is recommended. Predict suitable ventilation.

Consult the material safety data sheet for further information.

IMPORTANT NOTICE

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