VEXCON CHEMICALS, INC.
Concrete solutions for architects, engineers and builders since 1974
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POWERCOAT® EPOXY HD *"Don't say Epoxy- say PowerCoat"®*

HEAVY DUTY • CHEMICAL RESISTANT • DURABLE

DESCRIPTION

POWERCOAT EPOXY HD is a premium heavy duty breathable epoxy coating that provides durability, abrasion and excellent chemical resistance and adhesion for the most demanding environments.

Independent lab testing has shown that the product affords hardness and abrasion resistance comparable to typical 16-50 mil systems.

PowerCoat Epoxy features PowerCoat breathable technology which is designed to eliminate adhesion failure of associated with epoxy and polyurethane coatings due to moisture in concrete. PowerCoat breathable technology allows moisture vapor to pass through preventing blistering and peeling. Independent tests verify that PowerCoat has 3.30 perms rating, truly an epoxy that breathes. PowerCoat is guaranteed to reduce 27.0# Calcium Chloride test to below 3.0#/1000 sq.ft./24hrs.

PowerCoat Epoxy provides a coating barrier against physical abrasion, corrosion, and commonly encountered acid and alkali chemicals. It also resists gasoline, brake fluids, solvents, salts and some alcohols.

BENEFITS

- Available in clear gloss and semi-gloss/matte, 19 standard and custom colors. See Vexcon Color Systems brochure.
- Best chemical resistance including acids, alkalis, solvents and salts
- Vexcon's breathable technology
- Maximum hardness and adhesion
- Waterproofs and protects
- Cures with minimum shrinkage or loss in film thickness
- Performance warranty
- Apply to fresh concrete for fast track project completion
- Attractive seamless floor

RECCOMMENDED FOR

Recommended for commercial, industrial, transportation and other areas that require a durable and chemical resistant coating.

SPECIFICATIONS/COMPLIANCE

- VOC: Clear <400 grams/liter or <3.33 #/gal
- VOC Pigmented <340 grams/liter or <2.83 #/gal
- Meets- Clear
  - US EPA AIM- Industrial maintenance Coatings
- Meets- Pigmented
  - US EPA AIM- Industrial Maintenance Coatings
  - OTC- Industrial Maintenance Coatings
  - LADCO/ MRPO- Industrial Maintenance Coatings
  - Canada- Industrial Maintenance Coatings
- USDA requirements for paints and coatings for use in federally inspected meat and poultry plants.
- Class A fire rating ASTM E84
- OSHA / ADA non-slip requirement testing ASTM D2047
- CSI 09 96 00- High Performance Coatings

APPLICATION

- Surfaces must be primed with **PowerCoat Primer** , and should be allowed to dry for at least 4 hours for existing and 72 hours for new concrete prior to application of PowerCoat Epoxy HD.
- Large cracks should be repaired using **PowerCoat Epoxy Flexible Joint Sealant**.
- Prior to use pre-condition material to between 65ºF (18ºC) and 75ºF (24ºC).
- The coating is supplied in two parts, A and B, which are mixed together just prior to use.
- Separately mix with a jiffy mixer the individual contents of each until uniform in consistency. When this is done, mix part B into part A, and mix thoroughly until uniform.
- After thoroughly mixing, allow the mixed product to stand undisturbed for a 30-minute induction period before applying. Low temperatures require longer induction; temperature above 80°F., less induction.
- The product is supplied at the proper consistency for application and dilution will reduce efficiency.
- Same lot numbers should be used throughout the project. If lot numbers differ, box-mix prior to use. If different lots are used, apply a final thin coat to the entire area.
- Apply by industrial paint sprayer, lambs wool applicator or roller. If applying by roller for best results use ¼″nap mohair solvent roller. Use a roller pan to take off excess product. Do not dip & roll, or pour & spread.
- If using a roller, do not overwork the material. Coat in one lapping direction only; overworked material can affect the film properties.
- The mixed material has a pot life of approximately 4 to 6 hours.
- **Two coats are required, second coat can be applied after the first coat has thoroughly dried. The dry time is dependent on temperature, air flow, film thickness, and concrete conditions, not a specific number of hours. Do not put on a second coat if the first coat is not dry.**
- To protect your PowerCoat floor from ongoing construction dust, dirt, and debris, use **Certi-Vex® Talc Release** until construction is completed.
- Clean application equipment daily with **Certi-Vex Equipment Cleaner**.
- To improve non-slip profile, use **Certi-Vex Grip** or **PowerCoat Epoxy Non-Slip Additive**.
- For a unique and custom floor, use **Certi-Vex Deco Chips**.

COVERAGE RATES/ESTIMATING

Apply PowerCoat Primer at 200-300 sq ft/gal. **Note:** After application, surface must have an even sheen. If sheen is uneven or patchy, apply a second coat of Primer at 300 sq ft/gal.

Estimate PowerCoat Epoxy HD at 150-250 sq.ft./gal. (3.8-6.3 m2/L) depending on desired film thickness and porosity of concrete. Actual application is in two thin coats, not one thick coat. Calculated final dry film thickness is based on two coats.

- **PowerCoat Primer**

25% solids	First Coat	Second Coat (If needed)	Final Coverage Dry Film Thickness
Porous	200 sqft/gal 8 mils WFT	300 sqft/gal 5.3 mils WFT	125 sqft/gal 3.2 mils / 81µm DFT
Hard, Non-porous	300 sqft/gal 5.3 mils WFT	400 sqft/gal 4 mils WFT	175 sqft/gal 2.3 mils / 58µm DFT

- **PowerCoat Epoxy HD**

61% solids vol.	First Coat	Second Coat	Final Coverage Dry Film Thickness
Porous	300 sqft/gal 5.3 mils WFT	300 sqft/gal 5.3 mils WFT	150 sqft/gal 6.4 mils / 162µm DFT
Hard, Non-porous	400 sqft/gal 4 mils WFT	400 sqft/gal 4 mils WFT	200 sqft/gal 4.8 mils / 123 µm DFT
Hard, Non-porous	500 sqft/gal 3.2 mils WFT	500 sqft/gal 3.2 mils WFT	250 sqft/gal 3.9 mils / 99 µm DFT

DRY TIME

- The relative humidity, surface and air temperature will affect dry times.
- High humidity will extend dry times and require positive air flow for adequate drying. This is accomplished with the use of fans, open windows, or doors to properly circulate the air.
- Low temperatures will also extend dry times.
- NOTE: Surface temperatures can vary from ambient. Do not apply if surface temperatures are below 60ºF or above 85ºF.
- Material must be within temperature ranges prior to application.
- Do not apply second coat until the first coat is dry. Test for dryness by pressing tape hard onto the surface. Leave for 5 minutes, remove. If tape is clean, the surface is dry
- Dry-tack free Less than 6 hours
- Curing time - Foot traffic 24 hours
- Curing time – Vehicle traffic One week

SPECIAL NOTES

- PowerCoat Epoxy has splash and immersion resistance to many chemicals and can be used in areas where splashed materials will be removed in reasonable times, usually 4-24 hours. For immersion test information, see other side. If chemical is not on list, do not use in constant immersion applications without consulting with Vexcon.
- Do not apply below 60ºF (15ºC) or above 85ºF (29ºC).
- Do not apply more than one coat without proper surface preparation including surface abrasion after full cure.
- Do not use spiked shoes during application.
- A second coat can be applied after 6 hours and within 48 hours without abrading the surface.
- Maintenance-clean regularly with **StarSeal® EF Degreaser & Cleaner**
- For use by experienced contractors only.
- A semi-gloss/matte finish will develop in 7 days if using clear semi-gloss matte PowerCoat HD.
- Shelf Life: If properly stored in its original sealed containers, one year one year from date of manufacture. Rotate your stock.
- Storage/ Handling: Store in tightly sealed original factory container. Keep from freezing and exposure to moisture. Store at room temperature prior to use. Care should be taken to keep dirt, water and contaminants away from the opening of containers.
- Delivery: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.
- Proper application of Vexcon material is the responsibility of the installer or user. Telephone consultation and/or field visits by Vexcon personnel are for the sole purpose of making technical recommendations only, and not for providing quality control or supervision on location.
- Prior to using product, contact Vexcon for warranty information.

PACKAGING

Epoxy HD Clear	PKG WT	PKG VOL	WEIGHT %	VOLUME %
Part A Clear	12.37 lbs	1.6 gal	37%	40%
Part B Resin	21.17 lbs	2.4 gal	63%	60%
Totals	33.54 lbs	4.0 gal	100%	100%

Epoxy HD Pigmented	PKG WT	PKG VOL	WEIGHT %	VOLUME %
Part A Color	19.51 lbs	1.8 gal	50%	45%
Part B Resin	19.51lbs	2.2gal	50%	55%
Totals	39.02 lbs	4.0 gal	100%	100%

YIELD: 4 gallons of finished coating.
When using other containers to measure smaller volumes, the above ratios must be used.

HEALTH AND SAFETY

Vexcon MSDS #CP103 is an integral part of the safety and application of our product. A short synopsis is provided in this product data sheet. Before using this Vexcon product obtain a copy of the MSDS from your distributor or by contacting Vexcon Chemicals.

PHYSICAL PROPERTIES

- Solids 61% by volume, 72% by weight

INDEPENDENT TEST REPORT SUMMARY

Test Method	Characteristic	Results	Lab Report
ASTM B117	Salt Spray Resistance 100 hrs	Overall: 10 Scribed: 10	DL-10760
ASTM D1308*	Chemical Resistance 30-day immersion	See Chemical Resistance Chart TN168	DL Labs
ASTM D1640	Drying Time	Set to touch: 1 hr Tack free: 2 hrs Dry hard: 4 hrs Dry through: 4 hrs	DL-10760
ASTM D1653	Breathability Permeability	3.30 perms (English units) 2.17 metric perms	DL-11884
ASTM D2047	Slip Resistance	Coefficient of Friction PC Epoxy .70 PC Epoxy NonSlip 1.20	Case Consulting Laboratories
ASTM D2240	Hardness, Durometer Shore A	95-96°	DL Labs
ASTM D2240	Hardness, Durometer Shore D	84-87°	DL Labs
ASTM D3363	Hardness, Pencil	3H	DL-10760
ASTM D4060	Abrasion Resistance (Taber Abraser)	CS-17 wheel/1000g/1000 revs 0.22g, or 0.8% loss per 1000 revs. Wear cycles per mil = 885 cycles 1.13 mils / 1000 revs.	DL-11146
ASTM D4541	Adhesion (Pull-off)	Primed 395 psi Unprimed 350 psi	DL-10760
ASTM D522	Flexibility, Method B, 1/8" Mandrel	No cracking or loss of bond	DL-11372
ASTM D523	Gloss 60°	90 units	DL-10760
ASTM D968	Abrasion Resistance (Falling Sand)	>30L/mil	DL-11372
ASTM E84	Fire Rating	Flame Spread Index: Class A	HPVA T1054E
ASTM F1869 (formerly E1907)	Breathability Moisture Vapor Emission	3.0#/1000sqft/24hrs vs. 27#/1000sqft/24hrs uncoated	BEE Labs
ASTM G53	Accelerated Weathering 200 hrs	No blistering: 10 No chalking: 10	DL-10760
Fed Spec TTC-535-B Sec 3.4.10	Steam Resistance; 6 hrs exposure 24 hrs recovery, 6 hrs additional exposure	Blistering :10; Peeling: 10 Delamination: 10; Softening: 10 Adhesion Loss: 10 Discoloration: 200% better than control	DL-10760
Note: ASTM Standard Scoring System: 10 = No Effect, or Perfect Performance			

IMMERSION TESTING

Powercoat can be immersed in the following chemicals. Recommended coverage rates must be followed, with no pinholes or voids in the coating. Two coats Powercoat @ 300 sq.ft/gallon each are recommended. Do not use in constant immersion applications without consulting with Vexcon Chemicals first if chemical is not on list. See Vexcon Technical Note #TN168 for complete chart.

CHEMICAL	30 DAY RATING
Acetone	Loss of gloss
Anti Freeze Ethylene Glycol	No effect
Brake Fluid	Loss of gloss
Caustic (NaOH) 25%	No effect
Gasohol	No effect
Muriatic Acid (HCl) 15%	No effect
Skydrol 500B-4	No effect
Sodium Chloride 25%	No effect
Sulfuric Acid 98%	Discoloration; No blister or film degradation
Water	No effect
Xylene	Loss of gloss, No blisters or peeling

For other chemical resistance, contact Vexcon Chemicals.

CONTACT US @

Additional product information, technical assistance and customer services are available by contacting Vexcon Chemicals directly or our distributors.

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