Benjamin Moore®

HP | HIGH PERFORMANCE

HP4400

Waterborne Epoxy - Gloss

General Description

HP4400 Waterborne Epoxy is a durable, 2- component, chemical and abrasion resistant coating for both horizontal and vertical surfaces for use in commercial and industrial environments. This fast-drying epoxy is well suited for use on high traffic concrete floors exposed to foot, forklift, and vehicular traffic in addition to vertical surfaces needing a high performance solution. HP4400 can be used as a sealer on bare concrete, as well as a high build, full broadcast flooring system. Additionally, this product may be applied to new (high pH) concrete along with most generic coating types without the fear of lifting or wrinkling.

- Self-sealing
- 24-hour return-to-service
- High build for floors
- Can be applied direct to new (high PH) concrete

Usage

Properly prepared and primed steel, iron, non-ferrous metals, concrete, wood and drywall. HP4400 is designed for use in food and beverage processing plants, warehouses, industrial refurbishment, healthcare facilities, schools, industrial and commercial flooring, and other areas where a performance epoxy is needed which concerns that accompany conventional solvent thinned epoxies.

Colors	Clear (00), Silver Gray (70), Battleship Gray (75)
Bases	7X, 8X, 9X
Colorant System	Gennex

Technical Data

Resin		Amine Epoxy
Pigment		Titanium Dioxide
Volume Solids (mixed)		63 ± 2%
Spread Rate Per Gallon Refer to "Application"		85 – 400 Sq. Ft.
Recommended Film Thickness	Wet:	4.0 – 19.0 mils
	Dry:	2.5 – 12.0 mils
Depending on surface texture and porosity.		
Dry Time @ 77 °F (25 °C) @ 50% RH	To Touch:	4 hours
	To Recoat:	7 – 8 hours
Service Times: Light Industrial Use: 24 hours. **Moderate to Heavy Industrial Use:** 72 hours		
Recoat after 72 hours: Abrade the surface to ensure proper inter-coat adhesion.		
Surface Temperature During Application	Min:	55 °F
	Max:	100 °F
Viscosity		76 ± 4 KU
Flash Point		> 210 °F (99 °C)
Sheen / Gloss		85+ @ 60°
Clean Up		Warm, soapy water
Thinner		Water
Mixed Ratio (by volume)		2 : 1
Induction time @ 77 °F (25 °C)		None
Pot Life @ 77 °F (25 °C)		45 minutes
Weight Per Gallon (mixed)		11.0 lbs.
Storage Temperature	Min:	45 °F
	Max:	95 °F
VOC (Catalyzed)		< 50 g/L

Surface Preparation

Surfaces must be clean, dry and free of all grease, dirt, dust, oil and wax. Clean all surfaces using HP6000 Oil & Grease Emulsifier. Remove all remaining loose paint, rust and mill scale via Hand Tool Cleaning (SSPC-SP 2) or Power Tool cleaning (SSPC-SP 3). Fill holes and cracks and sand smooth. Glossy surfaces must be fully deglossed. Moderate to heavily rusted areas must be thoroughly prepared and active rust should be properly removed.

All masonry surfaces must be allowed to cure a minimum of 10 days before painting. Acid etch or abrasive blast all slick, glazed concrete or concrete with laitance. For acid etching, follow all manufacturer's directions and safety instructions. Rinse thoroughly and allow to dry.

WARNING! If you scrape, sand, or remove old paint, you may release lead dust. LEAD IS TOXIC. EXPOSURE TO LEAD DUST CAN CAUSE SERIOUS ILLNESS, SUCH AS BRAIN DAMAGE, ESPECIALLY IN CHILDREN. PREGNANT WOMEN SHOULD ALSO AVOID EXPOSURE. Wear a NIOSH approved respirator to control lead exposure. Clean up carefully with a HEPA vacuum and a wet mop. Before you start, find out how to protect yourself and your family by contacting the National Lead Informational Hotline at 1-800-424-LEAD or log on to www.epa.gov/lead.

Primer Systems

Concrete and Masonry: Self-priming, refer to "thinning".

Ferrous Metal: HP1550 Concrete and Metal Epoxy Primer is recommended in areas where adequate surface preparation is not possible. In highly corrosive areas where additional rust inhibitive qualities are required, prime with one coat of HP4600 Epoxy Mastic.

Galvanized, Aluminum and Non-Ferrous Metals: Clean oil from new galvanized metal by cleaning with HP6000 Oil & Grease Emulsifier. Prime new or un-rusted metal with HP1100 Acrylic Metal Primer or HP1750 Waterborne Bonding Primer.

Drywall and Cured Plaster: Self-priming

Wood: Sand surfaces. Prime bare spots and new wood with an acrylic primer/sealer/undercoater or with HP4400.

Previously Painted Surfaces: HP4400 can be applied over most finishes in good condition.

Compliance & Certifications

OTC	✓
OTC II	✓
CARB	✓
CARB07	✓
CARB19	✓
UTAH	✓
AZMC	✓
SCAQMD	✓

Eligible for LEED® v4	✓
CDPH Emissions Certified	✓
Eligible for CHPS low emitting credit (Collaborative for High Performance Schools)	✓

Mixing Instructions

This is a two-component product and is pre-proportioned for error free mixing. Mix "A" & "B" separately.

1.) Carefully empty the entire contents of HP4400.90 Part B catalyst into the can of HP4400 Part A component resin. Part A container is short filled to accept entire contents of Part B catalyst.

2.) Using a drill mixer at low speed, blend this mixture for three to five minutes until completely incorporated. Keep the mixing blade turning at a slow speed to minimize whipping air into material. Scrape sides of pail during the mixing process.

3.) Add water to reduce the material based on your application and mix for another 3-5 minutes. Refer to "thinning"

4.) Once completely mixed, use immediately

Pot Life: 45 minutes at 77 °F (25 °C)

Limitations

- Do not apply if air or surface temperatures are below 55 °F (12.8 °C) or above 100 °F (37.8 °C)
- This product is not intended for immersion service.
- Coated surfaces may discolor under tires due to plasticizer migration.
- Will chalk and fade if applied on exterior surfaces subjected to direct sunlight.

Technical Assistance

Available through your local authorized independent Benjamin Moore retailer.

call 1-866-708-9180
visit www.benjaminmoore.com

Application

Airless Spray: Tip range between .019 and .023. Total fluid output pressure at tip should not be less than 2000 psi.

NOTE: Do not allow material to remain in hoses, gun or spray equipment. Thoroughly flush all equipment with water.

Brush: Nylon/polyester

Roller: Phenolic core, 3/8" – 1/2" nap.

Squeegee: Pour the catalyzed material onto the floor in thin ribbons. Using a smooth/notched blade squeegee spread the poured material by pulling the squeegee toward the applicator and spread material at a rate not to exceed 150 square feet per gallon. Apply as evenly as possible working from left to right then back again.

Spread Rate based on application per gallon kit.
As a primer/sealer: 300 – 400 Sq. Ft.
As an intermediate or finish coat (brush and roll): 200 – 300 Sq. Ft.
As an intermediate or finish coat (squeegee/back-roll): 85 – 150 Sq. Ft.

Where non-skid characteristics are desired, hand broadcast an appropriate anti-slip aggregate into the wet film then back-roll to encapsulate. HP6300 works well for opaque finishes although will be noticeable in clear finishes.

Do not mix less than full batch/container quantities.

Do not apply if material, substrate or ambient temperature is below 55 °F (12.8 °C). Relative humidity should be below 85%. Do not apply if within 5 degrees of dew point or if rain is expected within 12 hours of application.

Thinning

When used as a sealer, HP4400 should be thinned up to 25% by volume with clean tap water. Intermediate and topcoats should be thinned with 10-15% water, depending on application method and atmospheric conditions.

Thinning with water by application and size

Application	1 Gallon Kit	5 Gallon Kit
Primer/Sealer	24 fl. oz.	120 fl. oz. (3.7 quarts)
Intermediate/Finish	10 – 15 fl. oz.	37 – 57 fl. oz. (1.2 – 1.8 quarts)

Clean Up

Wash brushes, rollers, and other painting tools with warm, soapy water immediately after use.

USE COMPLETELY OR DISPOSE OF PROPERLY. Dry, empty containers may be recycled in a can recycling program. Local disposal requirements vary; consult your sanitation department or state-designated environmental agency on disposal options.

Additional Notes

All high gloss surfaces can be slippery. Where nonskid characteristics are desired, hand broadcast an appropriate anti-slip aggregate into the wet film then back-roll to encapsulate. HP6300 Anti-Slip Aggregate works well for non-clear coats.

All epoxy coatings will chalk and fade if applied on exterior surfaces subjected to direct sunlight. All epoxies tend to yellow. Where color and gloss retention is important, top-coating will be necessary. This product will stain with prolonged exposure to some solvents and chemicals or in kennels if exposed to animal waste. This staining will not affect the durability or protective qualities of the coating. Will not cure at surface temperatures below 50 °F.

Test Data

TEST DATA	
Flexibility (ASTM D522)	Pass 3/16" Mandrel
Dry Heat Resistance (continuous)	200 °F (93.3 °C)
Wet Heat Resistance	150 °F (65.6 °C)
Pull-Off Adhesion (D7234)	480 PSI
Pencil Hardness (one week cure)	2H
Abrasion Resistance (ASTM D4060) Taber (CS-17 Wheel, 1000g load, 1000 cycles)	62.4 mg. loss

CHEMICAL RESISTANCE GUIDE (NON-IMMERSION)	
Fresh Water	Excellent
Salt Water	Excellent
Acids	Good
Alkalis	Good
Solvents	Excellent
Fuel	Good
Acidic Salt Solutions	Excellent
Alkaline Salt Solutions	Good
Neutral Salt Solutions	Excellent

Environmental Health & Safety Information

CAUTION: All floor coatings may become slippery when wet. Where non-skid characteristics are desired, use an appropriate anti-slip aggregate.

IMPORTANT: Designed to be mixed with other components. Mixture will have hazards of all components. Before opening packages, read all warning labels. Follow all precautions.

WARNING Cancer and Reproductive Harm– www.P65Warnings.ca.gov
Refer to the product label & Safety Data Sheet for product specific information.

IN CASE OF SPILL – Absorb with inert material and dispose of as specified under "Clean Up".

FOR PROFESSIONAL USE ONLY
PROTECT FROM FREEZING

Refer to Safety Data Sheet for additional health and safety information.