

HPS[®]2

Slow-Cure Epoxy Coatings

999211, 999212, 99213, 999299

ENNIS-FLINT[®] by PPG

Product data sheet

ENNIS-FLINT[®] by PPG HPS2 slow-cure epoxy coating is a durable, two-component pavement marking material designed for long line delineation on Portland Cement Concrete (PCC) and asphalt surfaces. HPS2 coating is available in White, Yellow or Black, each including a catalyst.

This material is a 100% solids plural-component system applied in a 2-to-1 mixture ratio by volume.

Product highlights

- 100% solids chemistry
- Excellent adhesion properties on a variety of substrates
- Formulated for slow set at a wide range of temperatures
- Exceptional abrasion and corrosion resistance
- UV degradation resistant
- Excellent reflectivity with glass beads or elements

Associated products

- 999211: Component A: White base resin and pigments
- 999212: Component A: Yellow base resin and pigments
- 999213: Component A: Black base resin and pigments
- 999299: Component B: Activator/curing agent

Technical data

Physical Properties	Result	
N/A	N/A	
N/A	N/A	
Test Properties	Test Method	Result
TiO ₂	ASTM D476 Type II	White 18-25% / Yellow 10-17%
Yellow Pigment	ASTM D476 Type II	7-10%
Epoxy Equivalent Weight	ASTM D1652	185 ±50 (pigment free basis)
Total Amine Value	ASTM D2074	425 ±50
Adhesion	ASTM D7234	100% concrete failure
Abrasion Resistance	ASTM D4060	< 80
Hardness (Shore D)	ASTM D2240	> 80
No Pick-Up / No Track Time	ASTM D711	< 45 minutes (with glass beads)
Yellowness Index	ASTM E313	Maximum before QUV = 6 Maximum after 72 hours QUV = 30
Tensile Strength	ASTM D638	> 6,000 psi
Compressive Strength	ASTM D695	> 12,000 psi

Coverage (linear feet/gallon)

Line Width	Thickness in mils		
	15	20	25
4"	320'	240'	191'
6"	214'	160'	128'
8"	160'	120'	96'

Packaging

Both components are available in 250-gallon totes and 55-gallon drums.

Storage

The shelf life of the unopened product is two years from date of manufacture with proper storage and minimal agitation. Proper storage includes inside or covered, above 35° F (2° C) and 110° F (43° C), and out of direct sunlight. Outside storage for short intervals is acceptable.

Installation and surface preparations



Surface Preparation

To ensure the best adhesion and properties, the surface must be clean and dry. The surface preparation includes, but is not limited to, cleaning and removal of sealing and curing compounds. All pavements shall be cleaned free of grease, oil, dust dirt, grass, loose gravel, loose or flaking paint and other deleterious materials. The pavement surface to be prepared shall be wider than the material line to be applied, such that a prepared area shall be clean and visible on all sides of the material after application. New asphalt, concrete and seal coated surfaces shall be in place a minimum of two weeks prior to application and all curing compounds must be removed. Any existing marking which may interfere with the performance of the material must be physically removed by any Agency approved method except for the use of chemicals. It would be best practice for all existing markings to be at least 90 percent removed. The material may be applied over temporary paint markings which are well adhered to the substrate and are thinner than 8 mils. The material is not designed to be used as a temporary marking. Upon completion of the surface preparation, the pavement surface preferably should first be power broomed and vacuumed. An additional compressed air operation, separate from the compressed air guns on the striping applicator, should be used to remove residue and debris resulting from the cleaning work. Compressed air must be used during the striping application. Epoxy recommended film thickness ranges from 15 to 25 mils. Do not apply thicker than 35 mils since that can cause delamination. Increased UV stability and color retention vs conventional epoxy for HPS-4. Cone whenever necessary.



Weather Conditions

Installation of the material shall only take place during dry conditions. Ambient and surface temperature must be 35°F. The road surface shall be completely dry with no dew or frost. Do not apply when rain is forecasted within 4 hours. Do not apply to wet, icy or salted roads.



Equipment

Epoxy is a plural component system formulated to be applied in a 2 to 1 mixture ratio by volume (Component A: Base Resin and Pigments. Component B: Catalyst). The material shall be applied with equipment utilizing the impingement mix, solvent free, airless spray application system or with a standard mix tube spray applicator. The equipment shall be designed to accurately control the flow of the material at the spray gun tip. The equipment shall have pressure gauges for each proportioning pump and a metering device to register the accumulated footage for each spray gun or a meter to determine the actual volume used. The epoxy equipment should be cleaned with MEK or Acetone. Thinning is not permitted for these products.



Dry Time

Dry time increases during nighttime applications. D713 ASTM and dry times for HPS-2 is less than 45 minutes with glass beads, HPS-3 less than 10 minutes with glass beads and HPS-4 is less than 4 minutes with glass beads.



Safety

Before working on this product, the user is required to read and understand the information provided in the Safety Data Sheets and to follow the safety precautions and good industrial hygiene.

Specifications (Effective Date)

Federal: Spec Name (04/02/2025)

State Name(s): Spec Name (04/02/2025)



WARNING: Certain colors of this product may contain chemicals known to the State of California to cause cancer and/or reproductive harm. For more information go to [P65Warnings.ca.gov](https://www.P65Warnings.ca.gov).

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