

## PRODUCT DATA / APPLICATION INSTRUCTIONS



### PRODUCT: HPS®-4 ACRYLATE EPOXY

**PRODUCT DESCRIPTION:** HPS-4 is a durable, rapid setting acrylate epoxy pavement marking material designed for long line delineation on Portland Cement Concrete (PCC) and asphalt surfaces. The material is available in White 999411, Yellow 999412, Black 999413 and Catalyst 999499.

HPS-4 is a 100% solids plural component system applied in a 2 to 1 mixture ratio by volume (Component A: Base Resin and Pigments. Component B: Activator / Curing Agent).

**ADVANTAGES:**

- 100% Solids chemistry
- Excellent adhesion properties
- Rapid cure speed at wide temperature range
- Exceptional abrasion and corrosion resistance
- Highly UV degradation resistant
- Excellent reflectivity with glass beads or reflective elements

**TECHNICAL DATA:**

PROPERTY	TEST METHOD	SPECIFICATIONS	
TiO2	ASTM D476 Type II	White 21-27%	Yellow 11-15%
Yellow Pigment			5-9%
Epoxy Equivalent WT	ASTM D1652	250+/-50 (pigment free basis)	
Total Amine Value	ASTM D2074	500+/-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	<5 min (with glass beads)	
Yellowness Index	ASTM E313	Max before QUV = 6	
		Max after 72 hours QUV = 15	
Tensile Strength	ASTM D638	>6000 psi	
Compressive Strength	ASTM D695	>12,000 psi	

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

**COVERAGE:**

Coverage in linear feet per gallon

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

**STORAGE:** Store in cool dry conditions. Avoid excessive heat. Do not freeze. Shelf life is two years in unopened packaging.

## **INSTALLATION AND SURFACE PREPARATIONS**

### **Placement**

Technical data regarding the material will be provided to the project engineer prior to starting work. All installation procedures must be followed per Ennis-Flint's instructions herein.

### **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 and temporary paint markings 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. All existing markings must 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.

### **Final Surface Preparation**

Upon completion of the surface preparation, the pavement surface must first be power broomed and vacuumed. An additional compressed air operation, separate from the compressed air guns on the striping applicator, must be used to remove residue and debris resulting from the cleaning work. Compressed air must be used during the striping application.

### **Weather Conditions**

Installation of the material shall only take place during dry conditions. Ambient and surface temperature must be 35°F and rising with a maximum 90% humidity. The road surface shall be completely dry with no dew or frost. The pavement and ambient temperature and weather conditions shall be determined and documented before the start of the application and at any other time deemed necessary by Ennis-Flint or the Agency.

### **Equipment**

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.

### **Safety**

Before working with 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.

#### **LEGAL NOTICE:**

The product data offered herein is, to the best of our knowledge, true and accurate, but all recommendations are made without warranty, expressed or implied. Because the conditions of use are beyond our control, neither Ennis-Flint nor its agents shall be liable for any injury, loss or damage, direct or consequential, arising from the use or the inability to use the product described herein. As Ennis-Flint has neither control over the installation of product described herein nor control of the environmental factors the installed markings are subjected to, there is no guarantee as to the durability or the retroreflective properties of any marking system applied. No person is authorized to make any statement or recommendation not contained in the Product Data, and any such statement or recommendation, if made, shall not bind the Corporation. Further, nothing contained herein shall be construed as a recommendation to use any product in conflict with existing patents, and no license under the claims of any patent is either implied or granted.