
Standard Specification for Epoxy Resin Adhesives for Bonding Traffic Markers to Hardened Portland Cement and Asphalt Concrete

AASHTO Designation: M 237-96 (2023)

Technically Revised: 1996

Reviewed but Not Updated: 2023

Technical Subcommittee: 4c, Markings and Coatings



**American Association of State Highway and Transportation Officials
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1. SCOPE

- 1.1. This specification covers epoxy resin adhesives for bonding traffic markers to pavement surfaces.
- 1.2. The values stated in SI units are to be regarded as the standard.
- 1.3. *This standard may involve hazardous materials, operations, and equipment. This standard does not purport to address all of the safety concerns associated with its use. It is the responsibility of the user of this standard to consult and establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. REFERENCED DOCUMENTS

- 2.1. *AASHTO Standards:*
 - < T 48, Flash Fire Point of Asphalt Binder by Cleveland Open Cup
 - < T 79, Flash Point with Tag Open-Cup Apparatus for Use with Material Having a Flash Point Less Than 93°C (200°F)
 - < T 192, Fineness of Hydraulic Cement by the 45-μm (No. 325) Sieve
 - < T 237, Testing Epoxy Resin Adhesive
- 2.2. *ASTM Standards:*
 - < D97, Standard Test Method for Pour Point of Petroleum Products
 - < D185, Standard Test Methods for Coarse Particles in Pigments
 - < D476, Standard Classification for Dry Pigmentary Titanium Dioxide Products
 - < D1208, Standard Test Methods for Common Properties of Certain Pigments
 - < D1209, Standard Test Method for Color of Clear Liquids (Platinum-Cobalt Scale)
 - < D1210, Standard Test Method for Fineness of Dispersion of Pigment-Vehicle Systems by Hegman-Type Gage
 - < D1257, Standard Specification for High-Gravity Glycerin
 - < D1483, Standard Test Method for Oil Absorption of Pigments by Gardner-Coleman Method
 - < D1544, Standard Test Method for Color of Transparent Liquids (Gardner Color Scale)
 - < D1747, Standard Test Method for Refractive Index of Viscous Materials
 - < D2752/D2752M, Standard Test Methods for Air Permeability of Asbestos Fibers

- < D3272, Standard Practice for Vacuum Distillation of Solvents from Solvent-Reducible Paints for Analysis (withdrawn 2008; no replacement)

2.3. *Federal Standards:*

- < Fed. Std. No. 141, Paint, Varnish, Lacquer and Related Materials; Methods of Inspection, Sampling and Testing, Method 4184, Percent Air, Method 4242, Color, Heilige-small
- < Fed. Std. No. 595, Colors Used in Government Procurement

3. CLASSIFICATION

- 3.1. *Type I*—Rapid Setting, High Viscosity, Epoxy Adhesive. This type of adhesive provides rapid adherence of traffic markers to the surface of the pavement.
- 3.2. *Type II*—Standard Setting, High Viscosity, Epoxy Adhesive. This type of adhesive is recommended for adherence of traffic markers to pavement surfaces when rapid set is not required.
- 3.3. *Type III*—Rapid Setting, Low Viscosity, Water Resistant, Epoxy Adhesive. This type of rapid setting adhesive, due to its low viscosity, is appropriate only for use with embedded traffic markers. It is more water-resistant than Type I or Type II.
- 3.4. *Type IV*—Standard Set Epoxy for Blade Deflecting-Type Plowable Markers.

4. MATERIALS

- 4.1. The material shall be furnished in two separate components for combining in equal volumes immediately prior to use.
- 4.2. *Composition:*
- 4.2.1. The composition of the components for Type I and Type II shall conform to the requirements prescribed in Table 1.
- 4.2.2. The composition of the components for Type III shall conform to the requirements prescribed in Table 2.
- 4.2.3. The components for Type IV shall conform to the requirements prescribed in Table 3.
- 4.2.4. Other epoxies meeting the physical requirements of Sections 4.3 and 4.4 for the type specified may be used with the approval of the purchaser.