Standard Method of Test for

Testing Epoxy Resin Adhesive

AASHTO Designation: T 237-05 (2019)

Technical Subcommittee: 4c, Markings and Coatings

Release: Group 2 (June)

AASHTO

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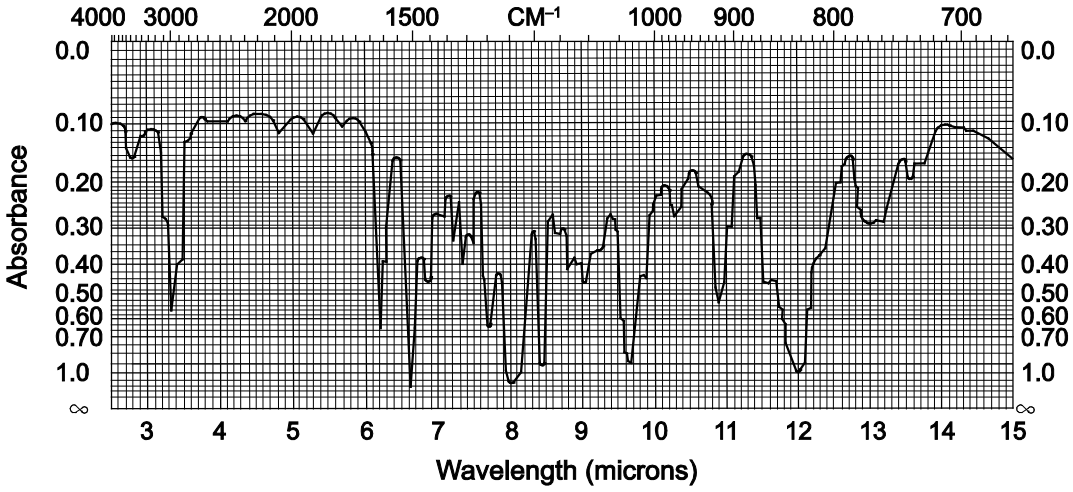
1. SCOPE

1.1. The methods given cover the examination of epoxy resin adhesives for use in bonding traffic markers to pavements, cured concrete to cured concrete, and fresh concrete to cured concrete, and are divided into two parts:

1.2. Part I (Sections 3 through 25) covers M 235M/M 235, Class I and II, and M 237, Class I adhesives. (See Figure 1.)

1.3. Part II (Sections 26 through 35) covers M 235M/M 235, Class III and M 237, Class II adhesives. (See Figure 1.)

1.4. The values stated in SI units are to be regarded as the standard.



Example of an IR Scan of One Component (Part) of a Multicomponent Epoxy Adhesive System

Figure 1—Example Spectrogram for Epoxy Adhesive Component

2. REFERENCED DOCUMENTS

2.1. *AASHTO Standards*:

- M 6, Fine Aggregate for Hydraulic Cement Concrete
- M 85, Portland Cement
- M 235M/M 235, Epoxy Resin Adhesives
- M 237, Epoxy Resin Adhesives for Bonding Traffic Markers to Hardened Portland Cement and Asphalt Concrete
- T 106M/T 106, Compressive Strength of Hydraulic Cement Mortar (Using 50-mm or 2-in. Cube Specimens)
- T 132, Tensile Strength of Hydraulic Cement Mortars

2.2. *ASTM Standards*:

- C778, Standard Specification for Standard Sand
- D570, Standard Test Method for Water Absorption of Plastics
- D1002, Standard Test Method for Apparent Shear Strength of Single-Lap-Joint Adhesively Bonded Metal Specimens by Tension Loading (Metal-to-Metal)
- D1084, Standard Test Methods for Viscosity of Adhesives

2.3. *Federal Standard*:

- Fed. Std. No. 141, Paint, Varnish, Lacquer, and Related Materials: Methods of Inspection, Sampling and Testing, Method 4184, Percent Air; Method 4242, Color of Transparent Liquids (Hellige Scale)

PART I

3. GEL TIME—APPARATUS AND MATERIALS

3.1. Gel timer.

3.2. Disposable wire stirrers.

3.3. Unwaxed paper cups, 60-mL (2-oz), 38-mm (1-$^1/_2$ in.) diameter base.

3.4. Unwaxed paper cups, 240-mL (8-oz), 76-mm (3-in.) diameter base.

3.5. Stainless Steel Spatula with blade 150 by 25 mm (6 by 1 in.), and with the end cut square.

3.6. Stopwatch.

Note 1—Equipment available from SHYODU Gel Timer Model 100, SHYODU Instrument Company, 6351 Old Tipton Road, Millington, TN 38053, Telephone (901) 872-6894, Facsimile (901) 872-6868.

4. GEL TIME—PROCEDURE

4.1. Condition both A and B components to 25 ± 1°C (77 ± 2°F).