
Standard Specification for Materials for Sand Seals

AASHTO Designation: MP xx-18¹

Technical Section: 5b, Bridge and Pavement Preservation

Release: Group 1 (April)

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

- 1.1. This standard specifies quality requirements for aggregate and emulsified asphalt for sand seals on properly prepared bituminous streets.
- 1.2. A sand seal is an application of emulsified asphalt, followed immediately by an application of a single layer of fine graded cover aggregate, which is then rolled for embedment. The seal may be applied in multiple lifts depending on traffic demands and existing road surface conditions.
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2. REFERENCED DOCUMENTS

- 2.1. *AASHTO Standards:*
- M 140, Emulsified Asphalt
 - M 208, Cationic Emulsified Asphalt
 - T 11, Materials Finer Than 75- μ m (No. 200) Sieve in Mineral Aggregates by Washing
 - T 27, Sieve Analysis of Fine and Coarse Aggregates
 - T 176, Plastic Fines in Graded Aggregates and Soils by Use of Sand Equivalent Test
 - T 304, Fine Aggregate Angularity
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3. TERMINOLOGY

- 3.1. *Definitions:*
- 3.1.1. *rapid-setting type emulsified asphalt*—any emulsified asphalt containing the CRS, CHFRS, HFRS, or RS designation as referenced in M 140, or M 208.
- 3.1.2. *medium-setting type emulsified asphalt*—any emulsified asphalt containing the MS or HFMS designation as referenced in M 140.
- 3.1.2. *cationic slow-setting*—any emulsified asphalt containing the CSS-1 or CSS-1h designation as reference in M 208.
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4. SIGNIFICANCE AND USE

- 4.1. This standard specification may be used to select and evaluate materials for the construction of emulsified asphalt sand seals.
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5. EMULSIFIED ASPHALT REQUIREMENTS

- 5.1. Emulsified asphalt for sand seals shall meet the requirements of rapid-setting, medium-setting, or cationic slow-setting type emulsified asphalt in M 82, M 140 or M 208.
- 5.2. The emulsified asphalt residue hardness classification is determined by the Owner Agency utilizing regional climatic and traffic conditions.

6. AGGREGATE REQUIREMENTS

- 6.1. Sand seal aggregate shall consist of fine granular material, composed of hard, durable particles, uniform in quality, and free from deleterious materials. Gradations and quality requirements are specified in Table 1. All percentages are by mass. The aggregate type to be used will be as specified by the Owner Agency.

Table 1—Requirements for Sand Seal Aggregates

Sieve Size (see T 11 or T 27)	Passing, %		
	I	II	III
³ / ₈ in.	100	100	100
No. 4	100	90–100	70–90
No. 8	90–100	65–90	45–70
No. 16	65–90	45–70	28–50
No. 30	40–65	30–50	19–34
No. 50	25–42	18–30	12–25
No. 100	15–30	10–21	7–18
No. 200	10–20	5–15	5–15

Note: Stockpile tolerances may be set by the local paving authority.

Sand Equivalent Test	45 minimum for all aggregate types
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7. KEYWORDS

- 7.1. Aggregate; emulsified asphalt; sand seal.

¹ This provisional standard was first published in 20yy.