
Standard Specification for

**Materials Used in Cold Recycled
Mixtures with Emulsified Asphalt**

AASHTO Designation: MP 31-22¹

Technically Revised: 2022

Technical Subcommittee: 2a, Emulsified Asphalts



**American Association of State Highway and Transportation Officials
555 12th Street NW, Suite 1000
Washington, DC 20004**

Standard Specification for

Materials Used in Cold Recycled Mixtures with Emulsified Asphalt

AASHTO Designation: MP 31-22¹

AASHTO

Technically Revised: 2022

Technical Subcommittee: 2a, Emulsified Asphalts

1. SCOPE

- 1.1. This standard covers requirements for component materials and asphalt mixtures for cold in-place recycling (CIR) or cold central plant recycling (CCPR) to produce a job mix formula.
- 1.2. This standard specifies minimum quality requirements for cold recycled mixtures and the emulsified asphalt.
-

2. REFERENCED DOCUMENTS

- 2.1. *AASHTO Standards:*
- M 85, Portland Cement
 - M 140, Emulsified Asphalt
 - M 208, Cationic Emulsified Asphalt
 - M 216, Quicklime and Hydrated Lime for Soil Stabilization
 - M 320, Performance-Graded Asphalt Binder
 - PP 86, Emulsified Asphalt Content of Cold Recycled Mixture Designs
 - T 245, Resistance to Plastic Flow of Asphalt Mixtures Using Marshall Apparatus
 - T 283, Resistance of Compacted Asphalt Mixtures to Moisture-Induced Damage
- 2.2. *ASTM Standard:*
- D7196, Standard Test Method for Raveling Test of Cold Mixed Emulsified Asphalt Samples
- 2.3. *Other Document:*
- LTPP Seasonal Asphalt Concrete Pavement Temperature Models, LTPPBind 3.1
-

3. TERMINOLOGY

- 3.1. *cold in-place recycling (CIR)*—the on-site recycling process to a typical treatment depth of 75 to 100 mm (3 to 4 in.), using a train of equipment (tanker trucks, milling machines, crushing and screening units, mixers, pavers, and rollers) and an emulsified asphalt with or without a combination of additives (lime, cement, aggregate), generating and reusing 100 percent of the milled material, with the resulting pavement serving as a base layer overlaid with a surface treatment or asphalt mixture overlay.