



## Standard Specification for Cutback Asphalt (Rapid-Curing Type)<sup>1</sup>

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*This standard has been approved for use by agencies of the Department of Defense.*

### 1. Scope

1.1 This specification covers cutback petroleum asphalts of the rapid-curing type for use in the construction and treatment of pavements.

### 2. Referenced Documents

#### 2.1 ASTM Standards:<sup>2</sup>

- D 5 Test Method for Penetration of Bituminous Materials
- D 95 Test Method for Water in Petroleum Products and Bituminous Materials by Distillation
- D 113 Test Method for Ductility of Bituminous Materials
- D 140 Practice for Sampling Bituminous Materials
- D 402 Test Method for Distillation of Cut-Back Asphaltic (Bituminous) Products
- D 2042 Test Method for Solubility of Asphalt Materials in Trichloroethylene

<sup>1</sup> This specification is under the jurisdiction of ASTM Committee D04 on Road and Paving Materials and is the direct responsibility of Subcommittee D04.40 on Asphalt Specifications.

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<sup>2</sup> For referenced ASTM standards, visit the ASTM website, [www.astm.org](http://www.astm.org), or contact ASTM Customer Service at [service@astm.org](mailto:service@astm.org). For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

D 2170 Test Method for Kinematic Viscosity of Asphalts (Bitumens)

D 3143 Test Method for Flash Point of Cutback Asphalt with Tag Open-Cup Apparatus

### 3. Properties

3.1 The cutback asphalt shall not foam when heated to application temperature and shall conform to the requirements prescribed in Table 1.

### 4. Test Methods

4.1 The material shall be sampled in accordance with Practice D 140, and the properties enumerated in this specification shall be determined in accordance with the following ASTM methods:

- 4.1.1 *Flash Point (Tag Open-Cup)*—Test Method D 3143.
- 4.1.2 *Viscosity, Kinematic*—Test Method D 2170.
- 4.1.3 *Distillation*—Test Method D 402.

NOTE 1—If a 100-mL graduate does not permit sufficiently close readings to determine conformity to these specifications with the desired accuracy, receivers graduated in 0.1-mL divisions shall be used.

- 4.1.4 *Penetration*—Test Method D 5.
- 4.1.5 *Ductility*—Test Method D 113.
- 4.1.6 *Solubility in Trichloroethylene*—Test Method D 2042.
- 4.1.7 *Water*—Test Method D 95.

**TABLE 1 Requirements for Cutback Asphalt (Rapid-Curing Type)**

NOTE—If the ductility at 25°C (77°F) is less than 100, the material will be acceptable if its ductility at 15°C (59°F) is more than 100.

Designation	RC-70		RC-250		RC-800		RC-3000	
	Min	Max	Min	Max	Min	Max	Min	Max
Kinematic viscosity at 60°C (140°F), mm <sup>2</sup> s	70	140	250	500	800	1600	3000	6000
Flash point (Tag open-cup), °C (°F)	...	...	27 + (80 +)	...	27 + (80 +)	...	27 + (80 +)	...
Distillation test:								
Distillate, volume percent of total distillate to 360°C (680°F):								
to 190°C (374°F)	10	...	...	...	...	...	...	...
to 225°C (437°F)	50	...	35	...	15	...	...	...
to 260°C (500°F)	70	...	60	...	45	...	25	...
to 316°C (600°F)	85	...	80	...	75	...	70	...
Residue from distillation to 360°C (680°F), percent volume by difference	55	...	65	...	75	...	80	...
Tests on residue from distillation:								
Viscosity at 60°C (140°F), Pa · s <sup>A</sup>	60	240	60	240	60	240	60	240
Ductility at 25°C (77°F), cm	100	...	100	...	100	...	100	...
Solubility in trichloroethylene, %	99.0	...	99.0	...	99.0	...	99.0	...
Water, %	...	0.2	...	0.2	...	0.2	...	0.2

<sup>A</sup> Instead of viscosity of the residue, the specifying agency, at its option, can specify penetration at 100 g: 5 s at 25°C (77°F) of 80 to 120 for Grades RC-70, RC-250, RC-800, and RC-3000. However, in no case will both be required.

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