



Designation: ~~D3019-94 (Reapproved 2007)~~ Designation: D 3019 – 08

Standard Specification for ~~Lap Cement Used with Asphalt Roll Roofing, Non-Fibered, Asbestos Fibered, and Non-Asbestos Fibered~~ Lap Cement Used with Asphalt Roll Roofing, Non-Fibered, Asbestos- Fibered, and Non-Asbestos-Fibered¹

This standard is issued under the fixed designation D 3019; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This specification covers lap cement consisting of asphalt dissolved in a volatile petroleum solvent with or without mineral or other stabilizers, or both, for use with roll roofing.

1.2 The values stated in SI units are to be regarded as the standard. The values given in parentheses are for information only.

1.3 The following precautionary caveat applies only to the test method portion, Section 5, of this specification. *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 *ASTM Standards:*²

~~D4 Test Method for Bitumen Content~~

~~D 36 Test Method for Softening Point of Bitumen (Ring-and-Ball Apparatus)~~

~~D95 Test Method for Water in Petroleum Products and Bituminous Materials by Distillation~~

~~D140 Practice for Sampling Bituminous Materials~~

~~D146 Test Methods for Sampling and Testing Bitumen-Saturated Felts and Woven Fabrics for Roofing and Waterproofing~~

~~D249 Specification for Asphalt Roll Roofing (Organic Felt) Surfaced with Mineral Granules~~

~~D402 Test Method for Distillation of Cut-Back Asphaltic (Bituminous) Products~~ 6511 Test Methods for Solvent Bearing Bituminous Compounds

3. Classification

3.1 *Type I*—Brushing consistency lap cement intended for use in the exposed-nailing method of roll roofing application. Type I lap cement contains no mineral or other stabilizers.

3.1.1 *Grade 1*—Made with an air-blown asphalt.

3.1.2 *Grade 2*—Made with a vacuum-reduced or steam-refined asphalt.

3.2 *Type II*—Heavy brushing or light troweling consistency lap cement intended for use in the concealed-nailing method of roll roofing application. Type II lap cement contains a quantity of short-fibered asbestos.

3.3 *Type III*—Heavy brushing or light troweling consistency lap cement intended for use in the concealed-nailing method of roll roofing application. Type III lap cement contains a quantity of mineral or other stabilizers, or both, but contains no asbestos.

4. Physical Requirements

4.1 The material shall conform to the requirements prescribed in Table 1.

5. Sampling and Test Methods

~~5.1 Sampling—Practice D140. Combine individual samples after thorough stirring, and restir the combined sample immediately before taking out portions for individual tests.~~

~~5.2 Water—Test Method D95~~ Sampling

¹ This specification is under the jurisdiction of ASTM Committee D08 on Roofing and Waterproofing and is the direct responsibility of Subcommittee D08.05 on Solvent-Bearing Bituminous Compounds for Roofing and Waterproofing.

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² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

TABLE 1 Requirements for Lap Cement

	Type I						Type II	Type III
	Grade 1		Grade 2		min	max		
	min	max	min	max				
Water, volume percent of original sample	..	0.5	...	0.5	0.5 max	2.5 max		
Distillation, total distillate to each temperature, volume percent of original sample:								
to 190°C (374°F)	5	20	2	20	...	...
to 225°C (437°F)	15	35	15	35	...	...
to 260°C (500°F)	25	40	25	40	...	...
to 316°C (600°F)	30	45	30	45	...	...
to 360°C (680°F)	...	50	...	50	...	...
Softening point of residue from distillation, °C (° F)	57 (135)	...	41 (106)	...	...	...
Solubility of the lap cement in trichloroethylene, mass percent	92.5	...	92.5	...	80.0 min	80.0 min		
Strength of lap at indicated age, min, kN/m (lbf/in.) width:								
at 24 h	...	...	...	...	3.0 (17.0) ^A	3.0 (17.0) ^A	

^A Felt may break outside the area of the cemented lap.

5.1 See Section 4, Sampling, of Test Methods D 6511.

~~5.3 Distillation—Test Method D402~~

6. Test Methods

6.1 Determine composition and physical requirements by using the procedures in Test Methods D 6511 and Test Method D 36.

~~5.4 Softening Point—Test Method D36.~~

~~5.5 Solubility in Trichloroethylene—Test Method D4, Procedure No. 1, but use trichloroethylene in place of carbon disulfide.~~

6.2 Strength of Lap:

6.2.1 Scope—This method covers the determination of the tensile shear strength of a 100-mm (4 in.) cemented lap of roll roofing under closely controlled laboratory conditions.

5.6.2 Significance—The lap strength is of importance only for Type II and Type III cement used in the concealed-nailing method of roll roofing application.

5.6.3 Test Specimen and Sample:

5.6.3.1 Use a sample of the actual roll roofing intended for use with the cement, or use any roofing with a 100-mm (4-in.) wide selvage conforming to the requirements of Specification D249.

5.6.3.2 Four test specimens are required. For each specimen, cut a 25 by 305-mm (1 by 12-in.) transverse strip of roofing that includes the selvage; then cut this strip in half so that one piece contains the selvage and the other is plain.

5.6.3.3 Spread 2.0 g of lap cement evenly over the selvage and set aside for 10 min at 20 to 30°C (68 to 86°F); then place the reverse side of the plain half over the cement-coated selvage in the same manner as a field lap would be made.

5.6.3.4 Place a 4.5-kg (10-lb) mass over the cemented lap. The mass shall be large enough to cover the 25 by 100-mm (1 by 4-in.) lap completely. After 2 min, remove the mass and age two of the specimens for 60 min, and the other two for 24 h at 20 to 30°C (68 to 86°F).

5.6.4 Procedure—Test each specimen immediately after the specified aging period in accordance with Test Methods D146; Section 13, except set apart the edges of the clamps 127 mm (5.0 in.) ± 2%, and use a driven clamp speed of 305 mm (12 in.)/min ± 0.7%. If any specimen fails to meet the minimum values specified in Table 1, report the material as failing the lap strength test.

6. Inspection

6.1 Inspection of the material shall be as agreed upon between the purchaser and the supplier as part of the purchase contract. —The lap strength is of importance only for Type II and Type III cement used in the concealed-nailing method of roll roofing application.

7. Rejection and Resubmittal

7.1 Failure to conform to any of the requirements prescribed in this specification may constitute grounds for rejection. In the case of rejection, the seller shall have the right to reinspect the rejected material and resubmit the lot after removal of those packages not conforming to the requirements. Inspection

7.1 Inspection of the material shall be as agreed upon between the purchaser and the supplier as part of the purchase contract.

8. Packaging and Package Marking

8.1 All products shall be packaged and labeled in accordance with applicable regulations. Each package shall be marked to indicate the applicable ASTM specification. Packages containing product meeting Type II shall bear a statement that the product contains asbestos. Rejection and Resubmittal