Designation: D 3019 – 94 (Reapproved 2000)ε1

Standard Specification for Lap Cement Used with Asphalt Roll Roofing, Non Fibered, Asbestos Fibered, and Non Abestos Fibered[1]

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.

ε[1] NOTE—Editorially switched from English dominant to SI dominant.

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:*

D 4 Test Method for Bitumen Content[2]

D 36 Test Method for Softening Point of Bitumen (Ring-and-Ball Apparatus)[2]

D 95 Test Method for Water in Petroleum Products and Bituminous Materials by Distillation[3]

D 140 Practice for Sampling Bituminous Materials[4]

D 146 Test Methods for Sampling and Testing Bitumen-Saturated Felts and Woven Fabrics for Roofing and Waterproofing[2]

D 249 Specification for Asphalt Roll Roofing (Organic Felt) Surfaced with Mineral Granules; Wide Selvage[2]

D 402 Test Method for Distillation of Cut-Back Asphaltic (Bituminous) Products[4]

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 D 140. Combine individual samples after thorough stirring, and restir the combined sample immediately before taking out portions for individual tests.

5.2 *Water*—Test Method D 95.

5.3 *Distillation*— Test Method D 402.

5.4 *Softening Point*— Test Method D 36.

5.5 *Solubility in Trichloroethylene*—Test Method D 4, Procedure No. 1, but use trichloroethylene in place of carbon disulfide.

5.6 *Strength of Lap*:

5.6.1 *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 D 249.

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

[1] This specification is under the jurisdiction of ASTM Committee D-8 on Roofing, Waterproofing, and Bituminous Materialsand is the direct responsibility of Subcommittee D08.05on Prepared Roofings, Shingles, and Siding Materials.

Current edition approved May 15, 1994. Published July 1994. Originally published as D 3019 – 72. Last previous edition D 3019 – 85.

[2] *Annual Book of ASTM Standards*, Vol 04.04.

[3] *Annual Book of ASTM Standards*, Vol 05.01.

[4] *Annual Book of ASTM Standards*, Vol 04.03.

Copyright © ASTM, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959, United States.

TABLE 1 Requirements for Lap Cement

	Type I				Type II	Type III
	Grade 1		Grade 2			
	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.

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 D 146, 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.

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.

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.

9. Keywords

9.1 asbestos fibered; asphalt; lap cement; non asbestos fibered; non fibered; roll roofing

The American Society for Testing and Materials takes no position respecting the validity of any patent rights asserted in connection with any item mentioned in this standard. Users of this standard are expressly advised that determination of the validity of any such patent rights, and the risk of infringement of such rights, are entirely their own responsibility.

This standard is subject to revision at any time by the responsible technical committee and must be reviewed every five years and if not revised, either reapproved or withdrawn. Your comments are invited either for revision of this standard or for additional standards and should be addressed to ASTM Headquarters. Your comments will receive careful consideration at a meeting of the responsible technical committee, which you may attend. If you feel that your comments have not received a fair hearing you should make your views known to the ASTM Committee on Standards, at the address shown below.

This standard is copyrighted by ASTM, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA 19428-2959, United States. Individual reprints (single or multiple copies) of this standard may be obtained by contacting ASTM at the above address or at 610-832-9585 (phone), 610-832-9555 (fax), or service@astm.org (e-mail); or through the ASTM website (www.astm.org).