Designation: C461 – 81 (Reapproved 2015)

# Standard Test Methods for Mastics and Coatings Used With Thermal Insulation[1]

This standard is issued under the fixed designation C461; 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 These test methods cover procedures for sampling and testing mastics and coatings for use as weather and vapor barrier finishes on thermal insulations and for other accessory use.

1.2 The values stated in inch-pound units are to be regarded as standard. The values given in parentheses are mathematical conversions to SI units that are provided for information only and are not considered standard.

1.3 The test methods appear in the following order:



1.4 *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]

C168 Terminology Relating to Thermal Insulation

C419 Practice for Making and Curing Test Specimens of Mastic Thermal Insulation Coatings

D56 Test Method for Flash Point by Tag Closed Cup Tester

D71 Test Method for Relative Density of Solid Pitch and Asphalt (Displacement Method)

D93 Test Methods for Flash Point by Pensky-Martens Closed Cup Tester

D140 Practice for Sampling Bituminous Materials

D217 Test Methods for Cone Penetration of Lubricating Grease

D2196 Test Methods for Rheological Properties of Non-Newtonian Materials by Rotational Viscometer

D3278 Test Methods for Flash Point of Liquids by Small Scale Closed-Cup Apparatus

## 3. Terminology

3.1 *Definitions*—For definitions of terms used in these test methods, see Terminology C168.

## 4. Sampling

4.1 Prior to opening or sampling, or both, any mastic or coating, its Material Safety Data Sheet (MSDS) should be reviewed to ensure appropriate precautions or personal protective equipment, or both, are utilized.

4.2 Take the samples for laboratory examination from the original containers immediately after stirring to a uniform condition. Determine the number of containers sampled as required to represent a shipment in accordance with Practice D140. Restir the composite sample immediately before taking out portions for individual tests.

## 5. Uniformity and Storage Stability

5.1 Open the original containers and examine them for uniformity of contents. Record the degree of separation, if any, into portions of appreciably different consistency, such as thick or thin layers, sedimentation or coagulation, etc., also of difficulty encountered in stirring to a uniform condition.

5.2 Examine the contents of a full container of not less than 1 qt (1 L) that has stood undisturbed for 48 h. Make notation of any separation of solvent or water, coagulation, or settlement of suspended matter, that cannot be overcome by moderate agitation.

5.3 Additionally, if required, examine and report the condition in the container after 3 months' storage, examining for uniformity in accordance with 5.1.

## 6. Stability Under Freezing

6.1 Fill a 1-pt (500-mL) press-top tin can three quarters full with the coating, and hold the filled and closed container in a

[1] These test methods are under the jurisdiction of ASTM Committee C16 on Thermal Insulation and are the direct responsibility of Subcommittee C16.33 on Insulation Finishes and Moisture.

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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.