

**UPDATED INFORMATIVE DIGEST
FOR
PROPOSED BUILDING STANDARDS
OF THE
CALIFORNIA ENERGY COMMISSION**

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**REGARDING THE 2005 BUILDING ENERGY EFFICIENCY STANDARDS
CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 6**

The California Energy Commission finds that revisions have been made that warrant a change to the informative digest contained in the Notice of Proposed Action (NOPA) for the 2005 California Building Energy Efficiency Standards, California Code of Regulations, Title 24, Part 6, Section 118(i)3.

Updated Summary of Existing Regulations

As discussed in the NOPA, the 2005 Building Energy Efficiency Standards (Standards) allow builders to claim performance credit for "cool roofs," that is, roofs that have solar reflectance and thermal emittance properties that reduce the need for air conditioning to cool the building. To qualify as cool roof products and to receive performance credit under the Standards, liquid-applied roof coatings installed in the field must meet specific physical performance requirements listed in Section 118(i)3 including Table 118-C. These requirements include minimum initial elongation (stretching until breakage) and final elongation after accelerated weathering, both at low temperature (0°F). The elongation must be measured in conformance with American Society of Testing and Materials (ASTM) D2370-98 (2002), *Standard Test Method for Tensile Properties of Organic Coatings*.

Updated Summary of Effect

(Government Code Section 11346.9(b))

The original proposed changes to Section 118(i)3 reflected in 45-day language resulted from a petition for rulemaking filed with the Energy Commission on April 4, 2005, and accepted April 13, 2005. In the course of the Commission's public process, stakeholders raised three other issues pertaining to Section 118(i)3:

1. Mr. Bill Kim of National Coatings Corporation, one of the petitioners, clarified during the June 7, 2005 public hearing that the petitioners intended for their proposed flexibility test (Test B of ASTM D522) to be an alternative to low-temperature initial tensile strength as well as to the initial and accelerated weathering elongation testing. The Energy Commission had not included this proposed change in the 45-day language but staff agreed with the proposal and included it in 15-day language.
2. Several stakeholders also recommended adding several ASTM standards and tests as alternatives to those contained in Table 118-C, to accommodate a number of other roof coating chemistries. The Commission closely examined the recommendations and worked with the stakeholders to determine which ASTM standards were appropriate. The 15-day language reflects those in the newly created Section 118(i)3B and Exception 2 to Section 118(i)3B. Those ASTM standards are also added to the Energy Standards' definitions in Section 101(b) and to the list of referenced documents in Appendix 1-A, as stated below.
3. Several stakeholders, through letters and oral comments at the June 7 hearing, expressed their concerns about the required minimum dry thickness of 20 mils. They argued that this thickness was appropriate for some types of acrylic coatings but that a number of other coating chemistries could be applied at lesser thicknesses and still be durable. The Commission agreed and amended the 45-day language, removing the 20 mil minimum and allowing manufacturers to recommend the appropriate mil thickness taking the roof substrate into consideration.

Updated Documents Incorporated by Reference

The following documents are being added as referenced documents to the 2005 Building Energy Efficiency Standards in Section 118(i)3, and the full definitions as listed here are being added to Section 101(b) and Appendix 1-A.

ASTM C836, American Society of Testing and Materials document entitled, "Standard Specification for High Solids Content, Cold Liquid-Applied Elastomeric Waterproofing Membrane for Use with Separate Wearing Course," 2005 (ASTM C836-05).

ASTM C1583, American Society of Testing and Materials document entitled, "Standard Test Method for Tensile Strength of Concrete Surfaces and the Bond Strength or Tensile Strength of Concrete Repair and Overlay Materials by Direct Tension" (Pull-off Method)," 2004 (ASTM C1583-04).

ASTM D3468, American Society of Testing and Materials document entitled, "Standard Specification for Liquid-Applied Neoprene and Chlorosulfonated Polyethylene Used in Roofing and Waterproofing," 1999 (ASTM D3468-99).

ASTM D5870, American Society of Testing and Materials document entitled, "Standard Practice for Calculating Property Retention Index of Plastics," 2003 [ASTM D5870-95 (2003)].

ASTM D6083, American Society of Testing and Materials document entitled, "Standard Specification for Liquid Applied Acrylic Coating Used in Roofing," 2005 (ASTM D6083-05e1).

ASTM D6694, American Society of Testing and Materials document entitled, "Standard Specification for Liquid-Applied Silicone Coating Used in Spray Polyurethane Foam Roofing," 2001 (ASTM D6694-01).

The following documents were already referenced in the Standards' Section 118(i)3 but were inadvertently omitted from the definitions in Section 101(b) and in the list of referenced documents in Appendix 1-A of the Standards. They are now being added to those sections.

ASTM D1653, American Society of Testing and Materials document entitled, "Standard Test Methods for Water Vapor Transmission of Organic Coating Films," 2003 (ASTM D1653-03).

ASTM D2370, American Society of Testing and Materials document entitled, "Standard Test Method for Tensile Properties of Organic Coatings," 2002 [ASTM D2370-98 (2002)].