

Code references can leave contractors hunting for standards

by Bob LaCasse



Roofing contractors attempting to comply with local building codes will find that these codes often include, by reference, a large number of standards released by the American Society for Testing and Materials (ASTM) and the American National Standards Institute (ANSI). Codes can also include federal standards and specifications when these documents have not been released by any other standards group or when they are required for government buildings or facilities. Code-making bodies use the test procedures and material standards found in the standards produced by ASTM, ANSI or the federal government to determine the quality of materials and construction that will be acceptable for structures under the codes' jurisdictions.

To comply with the requirements of these referenced standards, roofing contractors must know the standards' sources. This information can be found by contacting NRCA's Technical Services Department. NRCA's technical staff can help NRCA members find out where these standards are listed and what they require.

Many of the roofing-related ASTM standards that will be referenced in codes may be found in the chart below. Another source of information is the 24th edition of ASTM's *Standards in Building Codes*. This work lists in three volumes the standards that would ordinarily be found in 34 of the 66 volumes of the *Annual Book of ASTM Standards*. The standards listed in *Standards in Building Codes* are arranged in alphanumeric sequence. (an explanation of ASTM's designation method can be found on page 46 of the July 1986 issue of *Roofing Spec*)

Federal standards that are referenced in codes may be found in the *Index of Federal Specifications, Standards and Commercial Item Descriptions*. This publication is issued yearly by the U.S. General Services Administrator, Office of Federal Supply and Services. It lists the federal standardization documents (including mandatory standards) that have been printed and distributed, and tells contractors where they might obtain a copy of the referenced standard.

Important roofing-related ASTM standards

| ASTM Designation | Standard | | | | |
|------------------|---|-------|--|-------|---|
| C165 | Test Method for Compressive Properties of Thermal Insulation | D226 | Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing | D2829 | Test Method for Sampling and Analysis of Built-up Roofs |
| C177 | Test Method for Steady-State Thermal Transmission Properties by Means of the Guarded Hot Plate | D227 | Coal-Tar Saturated Organic Felt Used in Roofing and Waterproofing | D3019 | Lap Cement Used with Asphalt Roll Roofing |
| C203 | Test Method for Breaking Load and Calculated Flexural Strength of Preformed Block-Type Thermal Insulation | D249 | Asphalt Roll Roofing (Organic Felt) Surfaced with Mineral Granules | D3105 | Practice for Elastomeric and Plasto-meric Roofing and Waterproofing Materials |
| C208 | Insulating Board (Cellulosic Fiber) | D312 | Asphalt Used in Roofing | D3158 | Asphalt-Saturated and Coated Organic Felt Used in Roofing |
| C209 | Methods of Testing Insulating Board (Cellulosic Fiber) | D371 | Asphalt Roll Roofing (Organic Felt) Surfaced with Mineral Granules; Wide Selvage | D3468 | Liquid-Applied Neoprene and Chlorosulfonated Polyethylene Used in Roofing and Waterproofing |
| C552 | Cellular Glass Block and Pipe Thermal Insulation | D449 | Asphalt Used in Dampproofing and Waterproofing | D3617 | Test Method for Sampling and Analysis of New Built-up Membranes |
| C578 | Preformed, Block-Type Cellular Polystyrene Thermal Insulation | D450 | Coal Tar Pitch for Roofing, Damp-proofing and Waterproofing | D3672 | Venting, Inorganic Felt Base Sheet in Built-up Roofing |
| C591 | Preformed Cellular Urethane Thermal Insulation | D1227 | Emulsified Asphalt Used as a Protective Coating for Roofing | D3746 | Test Method for Comparative Impact Resistance of Bituminous Roofing Systems |
| C726 | Mineral Fiber Roof Insulation Board | D1327 | Bitumen-Saturated Woven Burlap Fabrics Used in Roofing and Waterproofing | D3805 | Application of Aluminum-Pigmented Asphalt Roof Coatings |
| C728 | Perlite Thermal Insulation Board | D1668 | Glass Fabrics (Woven and Treated) for Roofing and Waterproofing | D3909 | Asphalt Roll Roofing (Glass Felt) Surfaced with Mineral Granules |
| D36 | Test Method for Softening Point of Bitumen (Ring and Ball Apparatus) | D1863 | Mineral Aggregate Used on Built-up Roofs | D4434 | Poly(Vinyl Chloride) Sheet Roofing |
| D41 | Asphalt Primer Used in Roofing, Dampproofing and Waterproofing | D1864 | Test Method for Moisture in Mineral Aggregate | E84 | Test Method for Surface Burning Characteristics of Building Materials |
| D43 | Creosote Primer Used in Roofing, Dampproofing and Waterproofing | D2178 | Glass Felt, Asphalt-Impregnated, Used in Roofing and Waterproofing | E96 | Test Method for Water Vapor Transmission of Materials in Sheet Form |
| D61 | Test Method for Softening Point of Pitches (Cube-in-Water Method) | D2523 | Test Method for Testing Load-Strain Properties of Roofing Membrane | E108 | Fire Tests of Roof Coverings |
| D173 | Bitumen-Saturated Cotton Fabrics Used in Roofing and Waterproofing | D2626 | Asphalt-Saturated and Coated Organic Felt Used in Roofing | E119 | Fire Tests of Building Construction and Materials |
| D224 | Smooth-Surfaced Asphalt Roll Roofing (Organic Felt) | D2822 | Asphalt Roof Cement | E907 | Test Method for Field Testing Uplift Resistance—Steel-Deck BUR |
| | | D2823 | Asphalt Roof Coatings | E936 | Practice for Roof Systems Employing Steel Deck, Preformed Roof Insulation and BUR |
| | | D2824 | Aluminum-Pigmented Asphalt Roof Coatings | | |