

	Asphalt Roofing Manufacturers Association	
	1156 Fifteenth Street, NW, Suite 900 Washington, D.C. 20005	Tel: 202.207.0917 Fax: 202.223.9741

New Wind Standards for Asphalt Shingles

Proven Wind Performance

Asphalt shingles, with proven performance in high winds, now meet higher wind standards. Following the Florida Hurricanes of 2004, inspection teams noted that many older asphalt shingled roofs performed very well. Newer shingle roofs performed even better, surviving the worst winds of the hurricanes. Available in a wide variety of colors, textures, shapes and styles, asphalt shingles provide an excellent value to the building owner.

Wind Resistance Classification

The Asphalt Roofers Manufacturers Association (ARMA) has led the effort to develop new, higher wind performance standards for Asphalt Shingles. Based on fundamental research and wind tunnel tests¹ a new wind resistance classification system has been adopted by the Building Codes. It is simple and easy to use. Consumers need to know two things to be a wise buyer of wind resistant shingle products:

- The wind zone of the building being roofed. This can always be obtained from the local building code enforcement office. For most of the continental United States the wind zone is 90 mph. Other areas, such as coastal regions or other special wind zones, have wind zone designations up to 150 mph.
- The wind classification of the shingle proposed for the building. Shingles are classified by letter corresponding to the wind zones as follows:

Wind Classification of Asphalt Shingles

For Wind Zone	Required Shingle Wind Classification
Up to and including 90 mph	Class D
Up to and including 120 mph	Class G
Up to and including 150 mph	Class H

Because the 90 mph zone covers most of the United States, a Class D will be required in most areas. If the building to be roofed is in a coastal area or in a high wind zone, a Class G or H shingle will be required.²

Building Codes

This system is now incorporated in the International Code Councils International Building Code 2004 supplement which will be adopted in most jurisdictions over the next few years. Manufacturers are in the process of classifying their individual products and many products are available that meet the new code requirements. Note that some jurisdictions may enforce older versions of the Building Codes and may have a variety of requirements. These are spelled out in the local or state ordinances.³

Shingle Installation

Professional roofing contractors know that proper installation is critical. To assure maximum wind performance, asphalt shingles must be applied to a properly installed deck following the manufacturers' requirements for number, type, and placement of nails.

Notes:

1. The new building code requirement is based on Underwriters Laboratory, Inc. (UL) standard UL2390 "Test Method for Wind Resistant Asphalt Shingles with Sealed Tabs" and ASTM D6381 "Standard Test Method for Measurement of Asphalt Shingle Mechanical Uplift Resistance".
2. This classification applies to about 98% of the shingled roofs installed. If the building is in a ground roughness D or on a building greater than 60' in height the manufacturer will need to be contacted to determine the proper shingle classification.
3. The oldest codes require Asphalt Shingles to have 4 nails installed in wind zones less than 110 mph and 6 nails for shingles installed in wind zones greater than 110 mph. Some jurisdictions require the shingles that are installed in wind zones of 110 mph and greater be tested using ASTM D3161 D3161-03b Standard Test Method for Wind-Resistance of Asphalt Shingles (Fan-Induced Method) to 110 mph and be classified Class F.