

# Hardware Highlights



## ANSI/BHMA A156.21-2009 American National Standard for Thresholds

Standard ANSI/BHMA A156.21-2009 establishes requirements for thresholds. Types are described with identifying numbers. Strength tests, fastening systems, and gasketing tests are included. For further information, consult the full standard, ANSI/BHMA A156.21 for Thresholds.

BHMA has created this series of *Hardware Highlights* to provide useful, accessible information about builders hardware for anyone with an interest in devices that hang, control, secure, and trim the doors. BHMA is the trade association which represents almost all of the North American manufacturers of builders hardware. One of its main activities since 1983 has been the development and maintenance of ANSI-approved standards for 35 separate product categories.

**Product Performance:** Purchasers of thresholds certified to A156.21 (<http://buildershardware.com/cpd>) can be assured products will perform to their expectations.

Below are an explanation and some examples of the evaluations conducted for certification:

INSTALLATION	DURABILITY	DEFINITIONS
The standard includes information on fasteners and related requirements for proper installation. For example: "The length of screws used shall be determined by the height of the threshold with a minimum of 3/4 in (19 mm) thread engagement in the floor or anchoring device used."	Building products are expected to last a long time, and builders hardware is no exception. Thresholds meeting A156.21 have been shown to withstand a 1000 pound compressive load with a permanent set that does not 0.040 in. (1.02mm).	A useful set of terminology covering threshold attributes is provided. For example: <b>Half Saddle:</b> A threshold with a flat top that is smooth or fluted and lies flush with an offset. <b>Flat Saddle:</b> A threshold with a flat top that is smooth or fluted.

**Building Codes** Builders hardware provides several attributes that are essential to building safety and performance, including egress and fire protection. BHMA locksets are designed to comply with all applicable requirements. For example, hardware for fire doors is evaluated and listed to UL 10C by an accredited third-party testing laboratory.

**Accessibility** There are various types of trim which meet the ADA and A117.1 requirements for operable parts to be "operable with one hand and shall not require tight grasping, pinching or twisting of the wrist." Lever or paddle type trim meets these stipulations, while knob trim should be avoided for accessible routes. In addition, BHMA certified hardware must comply with the operational forces in their respective standards, which have been shown to be suitable for accessible applications.

**Sustainability** Locks and latches contribute to building sustainability through their verified durability, as well as material characteristics such as recycled content and recyclability. The reliable closing and sealing of openings can also contribute to energy conservation. BHMA has developed Product Category Rules, which will further define sustainability requirements and guide life cycle assessments and environmental performance declarations.

**Type Numbers:** Another significant contribution of standards for product specification is a numbering system for lock function. Please consult A156.21 for the full list; examples are provided here:

**Half Saddle Thresholds:** Half saddle threshold, fluted surface. J13100 J33100

**Interlocking Thresholds:** Interlocking threshold, single lip, smooth surface. Hook strip applied to door. J14370 J34370

**Rabbeted Thresholds:** Rabbeted threshold, fluted surface. J15100 J35100

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This document is not a substitute for the full standard. Refer to the entire standard for full information.