

GUIDELINE 12

ASTM A 354	Quenched and Tempered Alloy Steel Bolts, Studs, and Other Externally Threaded Fasteners.
ASTM A 449	Standard Specification for Quenched and Tempered Steel Bolts and Studs.
ASTM A 490	Standard Specification for Structural Bolts, Alloy Steel, Heat Treated, 150 ksi Minimum Tensile Strength.
ASTM D5363	Anaerobic Single-Component Adhesives (AN).
SAE AS 8879	Screw Threads - UNJ Profile, Inch Controlled Radius Root with Increased Minor Diameter.

3. Definitions. This section not applicable to this guideline.

4. General guidelines.

4.1 Threaded fasteners and related parts.

4.1.1 Threaded fasteners. ASME B18 Commercial/Industrial fastener standards covering inch and metric externally threaded, internally threaded, and non-threaded fastener products should be specified in conformance with ASME B18.24 "Part Identifying Number (PIN) Code System Standard" for B18 Fastener Products.

4.1.2 Screw threads. Screw thread selection should be based on the using applications in accordance with the following.

- a. Screw threads should be in accordance with FED-STD-H28/2, ASME B1.1, or ASME B1.13M in applications where the threaded fasteners are required to mate with or mount threaded commercial equipment or devices.
- b. Screw threads should be in accordance with SAE AS 8879 for applications requiring high strength or high fatigue life. (Caution should be exercised where a SAE AS 8879 UNJ external thread fastener is used due to its incompatibility with the commonly used UNC, UNF or UNEF threaded nut or tapped hole.)
- c. Screw thread sizes and series for general usage should be selected in accordance with SAE AS 8879.

4.1.3 Screws. Screws should conform to the specifications listed below.

- a. Machine screws should conform to FF-S-92, ASME B18.6.3, or ASME B18.6.7M.
- b. Cap screws should conform to FF-S-85, FF-S-86, or ASME B18.2.1.
- c. Set-screws should conform to FF-S-200, FF-S-210, or ASME B18.3.
- d. Self-locking screws should conform to MIL-DTL-18240. Fiber inserts should not be used as the locking device.

4.1.4 Bolts. Bolts should conform to the specifications listed below.

- a. Hex bolts should conform to one of the following specifications:

ASME B18.2.1	ASTM A 325	ASTM A 490.
ASTM A 449	ASTM A 354	
- b. Bolt studs should conform to MIL-DTL-1222.
- c. Aircraft bolts should conform to MIL-B-6812.
- d. Internal wrenching bolts should conform to MIL-B-7838.
- e. High tensile strength bolts should conform to NASM-8831.