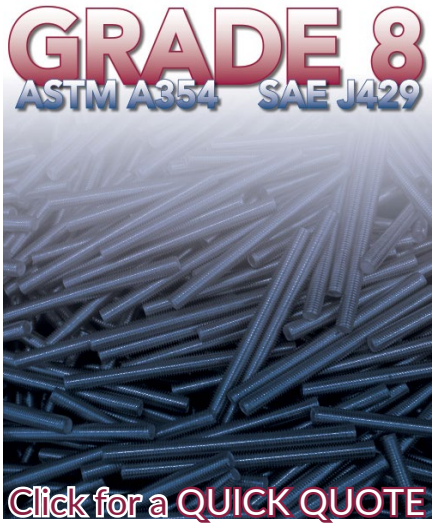
ALL AMERICA THREADED PRODUCTS®

GRADE 8



PRODUCT OVERVIEW

ASTM A354 BD is used for structural bolts while SAE J429 Grade 8 is an automotive specification. Both specifications are heat treated and tempered at 800° F, which creates a very strong part, but increases brittleness more than comparative specifications. These high-strength bolts are typically used in standard temperature and pressure level applications such as general-use construction projects.

- **Diameters:** 3/8”, 1/2”, 5/8”, 3/4”, 7/8”, 1”
- **Lengths:** Any length up to 8”
- **Finishes:** Plain, Yellow Zinc
- **Products:** Threaded Studs
- **Applications:** Manufacturing and general-use construction projects

With a minimum tensile strength of 150 ksi and minimum yield of 130 ksi, Grade 8 has a greater tensile and yield strength compared to other steel grades such as Grade 2, Grade 5, and B7. AATP will dual certify to ASTM A354 BD and SAE J429 Grade 8. The Grade 8 material from AATP is 100 percent domestically melted and manufactured. The chemistry and mechanical properties will meet the requirements for both specifications. Chemical requirements are provided from the steel mill, while mechanical requirements are provided from our third-party vendor responsible for heat treating after parts have been threaded.

Material certificate and material test reports are available upon request

GRADE 8 PRODUCT OFFERING

AATP CAPABILITIES

Specification	Grade	Diameters	UNC/UNF	Products	Lengths	Stock Finishes	Special Finish
ASTM A354	BD	3/8”, 1/2”, 5/8”, 3/4”, 7/8”, 1”	UNC UNF	Threaded Studs	Less than 8”	Plain	Yellow Zinc
SAE J429	8	3/8”, 1/2”, 5/8”, 3/4”, 7/8”, 1”	UNC UNF	Threaded Studs	Less than 8”	Plain	Yellow Zinc

MECHANICAL PROPERTIES

Specification	Grade	Marking	Diameters*	UNC/UNF	Tensile (ksi)	Yield (ksi min)	Elong % (min)	RA% (min)	HRC
ASTM A354	BD	B7 01EY	3/8”, 1/2”, 5/8”, 3/4”, 7/8”, 1”	UNC UNF	150 min	130	14	40	33 to 39
SAE J429	8		3/8”, 1/2”, 5/8”, 3/4”, 7/8”, 1”	UNC UNF	150 min	130	12	35	33 to 39

CHEMICAL PROPERTIES

Specification - Grade	Carbon	Manganese	Phosphorus	Sulfur	Treatment
ASTM A354 - BD	0.30 - 0.53	0.60 min	0.035 max	0.040 max	Quench/Temper
SAE J429 - 8	0.25 - 0.55	N/A	0.025 max	0.25 max	Quench/Temper