



Knoxville Bolt and Screw, Inc.

www.knoxvillebolt.com

614 Sevier Avenue 865-573-1991
 P.O. Box 9149
 Knoxville, TN 37920-1738

800-231-3309
 800-231-9566
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| SAE & ASTM Bolt Grade Identification Marks and Mechanical Properties | | | | | |
|--|--------------------|---------------------|-------------------------|----------------------------|----------------|
| Bolt Grade Identification Marking | Specs | Nominal Size (inch) | Proof Load Stress (ksi) | Tensile Strength (min ksi) | Material Notes |
| | SAE Grade 2 | 1/4 thru 3/4 | 55 | 74 | 1 |
| | | over 3/4 thru 1-1/2 | 33 | 60 | |
| | ASTM A307 | 1/4 to 1 1/2 | 33 | 60 | 3 |
| | SAE - Grade 5 | 1/4 thru 1 | 85 | 120 | 2, b |
| | ASTM A449 - Type 1 | 1 1/8 thru 1-1/2 | 74 | 105 | |
| | | 1 3/4 thru 3 | 55 | 90 | |
| | ASTM A325 - Type 1 | 1/2 thru 1 | 85 | 120 | 2, b |
| | | 1 1/8 to 1-1/2 | 74 | 105 | |
| | ASTM A325 - Type 2 | 1/2 thru 1 | 85 | 120 | 4, b |
| | | 1 1/8 to 1-1/2 | 74 | 105 | |








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| | | | | | |
|---|----------------------|----------------|-----|-----|-----|
|  | ASTM A325 - Type 3 | 1/2 thru 1 | 85 | 120 | 5,b |
| | | 1 1/8 to 1-1/2 | 74 | 105 | |
|  | ASTM A354 - Grade BC | 1/4 thru 2-1/2 | 105 | 125 | 5,b |
| | | 2-3/4 thru 4 | 95 | 115 | |
|  | SAE - Grade 8 | 1/4 thru 1-1/2 | 120 | 150 | 7,b |
| | ASTM A354 - Grade BD | 1/4 thru 1-1/2 | 120 | 150 | 6,b |
|  | ASTM A490 - Type 1 | 1/2 thru 1-1/2 | 120 | 150 | 6,b |
|  | ASTM A490 - Type 3 | 1/2 thru 1-1/2 | 120 | 150 | 5,b |

Material Notes

1. Low or Medium Carbon Steel
2. Medium Carbon Steel
3. Low Carbon
4. Low Carbon Martensite
5. Weathering Steel
6. Alloy Steel
7. Medium Carbon Alloy

Treatment -

- a - cold drawn
- b - quenched and tempered