

## Material properties

<b>Material</b>	<b>304 (USA / AISI)</b>
<b>Group</b>	Stainless and heat resisting steels
<b>Subgroup</b>	SAE AMS-QQ-S-763

### Comment

**Application** Corrosion-resistant steel bars, wire, shapes (sections), and forgings.  
The material may be made by one or more of the following processes: electric furnace, electric induction, vacuum furnace or other suitable commercial processes. If a specific melting practice is required by the purchaser, it shall be specified on the purchase order.

Yield Stress[MPa]			
Dimension	Min	Max	Approx
> 12.7mm; Annealed (Cold)	207	-	-
> 12.7 mm - Annealed (Hot)	207	-	-
12.7 - 19.05 mm, Cold worked	689	-	-
19.06 - 25.4 mm, Cold worked	552	-	-
25.5 - 31.75 mm, Cold worked	448	-	-
31.76 - 38.1 mm, Cold worked	345	-	-
38.2 - 44.5 mm, Cold worked	310	-	-
> 44.5 mm, Cold worked	207	-	-

Tensile Stress[MPa]			
Dimension	Min	Max	Approx
> 12.7mm; Annealed (Cold)	517	-	-
> 12.7 mm - Annealed (Hot)	517	-	-
12.7 - 19.05 mm, Cold worked	862	-	-
19.06 - 25.4 mm, Cold worked	793	-	-
25.5 - 31.75 mm, Cold worked	754	-	-
31.76 - 38.1 mm, Cold worked	689	-	-
38.2 - 44.5 mm, Cold worked	655	-	-
> 44.5 mm, Cold worked	517	-	-

Elongation A5 [%]			
Dimension	Min	Max	Approx
> 12.7mm; Annealed (Cold)	30.0	-	-
> 12.7 mm - Annealed (Hot)	40.0	-	-

**Elongation A5 [%]**

<b>Dimension</b>	<b>Min</b>	<b>Max</b>	<b>Approx</b>
12.7 - 19.05 mm, Cold worked	12.0	-	-
19.06 - 25.4 mm, Cold worked	15.0	-	-
25.5 - 31.75 mm, Cold worked	20.0	-	-
31.76 - 38.1 mm, Cold worked	28.0	-	-
38.2 - 44.5 mm, Cold worked	30.0	-	-
> 44.5 mm, Cold worked	35.0	-	-

**Chemical Composition [%]**

<b>Criterion</b>	<b>Min</b>	<b>Max</b>	<b>Approx</b>
C	-	0.1500	-
Si	-	1.0000	-
Mn	-	2.0000	-
P	-	0.0450	-
S	-	0.0300	-
Cr	18.000	20.000	-
Mo	-	1.0000	-
Ni	8.0000	10.500	-
Cu	-	1.0000	-
N	-	0.1000	-