

Q235B Included in 3 standards (China)

Chemical composition

C	< 0.22	Si	< 0.35	Mn	< 1.4	P	< 0.045
S	< 0.045	Cr	< 0.3	Ni	< 0.3	Cu	< 0.3
N	< 0.008	As	< 0.08	Fe	Rest		

It's allowed to exceed N content up to 0.014% in finished products. On exceeding N for every 0.001% max P content reduces by 0.005%.

F - unkilld steel

Z - killed stee

TZ - special killed stee

C > 0.20: by agreement

Properties

By GB/T 700-2006

For section of thickness >100mm is allowed to reduce the lower limit of strength up to 20N/mm²

Thickness: < 16 mm ;

Yield Strength: > 235 MPa

Tensile Strength: 370 - 500 MPa

Elongation: > 26 %

Impact energy KV 20°C: > 27 J

Thickness: 16 - 40 mm ;

Yield Strength: > 225 MPa

Tensile Strength: 370 - 500 MPa

Elongation: > 26 %

Impact energy KV 20°C: > 27 J

Thickness: 40 - 60 mm ;

Yield Strength: > 215 MPa

Tensile Strength: 370 - 500 MPa

Elongation: > 25 %

Impact energy KV 20°C: > 27 J

Thickness: 60 - 100 mm ;

Yield Strength: > 215 MPa

Tensile Strength: 370 - 500 MPa

Elongation: > 24 %

Impact energy KV 20°C: > 27 J

Thickness: 100 - 150 mm ;

Yield Strength: > 195 MPa

Tensile Strength: 370 - 500 MPa

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Elongation: > 22 %

Impact energy KV 20°C: > 27 J

Thickness: 150 - 200 mm ;

Yield Strength: > 185 MPa

Tensile Strength: 370 - 500 MPa

Elongation: > 21 %

Impact energy KV 20°C: > 27 J

Cold-bend test

Longitudinal test pieces

Thickness: < 60 mm ;

Return Bend: d=a

Thickness: 60 - 100 mm ;

Return Bend: d=2a

Transverse test pieces

Thickness: < 60 mm ;

Return Bend: d=1.5a

Thickness: 60 - 100 mm ;

Return Bend: d=2.5a