

09G2S Included in 22 standards (CIS Countries)

Chemical composition

C	< 0.12	Si	0.5 - 0.8	Mn	1.3 - 1.7	P	< 0.035
S	< 0.04	Cr	< 0.3	Ni	< 0.3	Cu	< 0.3
N	< 0.008	As	< 0.08	Fe	Rest		

In case of melting from Kerch ores As < 0.15% is permissible, in this case P < 0.03%;

Adding of Al < 0.05% and Ti < 0.03% are permissible;

N < 0.012% is permissible if toughness requirements are satisfied

Mechanical properties and impact elasticity requirements for flat (except KCV) are determined for cross samples

Tensile strength of plug and junction metal made in accordance with GOST 16523 - 430 MPa

Elongation of plug and junction metal made in accordance with GOST 17066 - 17%

Properties

By GOST 19281

Impact Value KCU, 20 °C: categories 1, 10

Impact Value KCU after Ageing: categories 2, 10, 11, 12, 13, 14, 15

Impact Value KCU, -20 °C: categories 3, 11

Impact Value KCU, -40 °C: categories 4, 12

Impact Value KCU, -50 °C: categories 5, 13

Impact Value KCU, -60 °C: categories 6, 14

Impact Value KCU, -70 °C: categories 7, 15

Impact Value KCV, 0 °C: category 8

Impact Value KCV, -20 °C: category 9

265 strength class

Long products

Thickness: 20 - 32 mm ;

Yield Strength: > 265 MPa

Tensile Strength: > 430 MPa

Elongation: > 21 %

Return Bend: d=2a

Impact Value KCU after Ageing: > 29 J/sm²

Impact Value KCU, -40 °C: > 29 J/sm²

Thickness: 32 - 100 mm ;

Yield Strength: > 265 MPa

Tensile Strength: > 430 MPa

Elongation: > 21 %

Return Bend: d=2a

Impact Value KCU, 20 °C: > 59 J/sm²

09G2S Included in 22 standards (CIS Countries)

Impact Value KCU after Ageing: > 29 J/sm²

Impact Value KCU, -40°C: > 29 J/sm²

Plates, sheets, strips, coils

Thickness: 20 - 160 mm ;

Yield Strength: > 265 MPa

Tensile Strength: > 450 MPa

Elongation: > 21 %

Return Bend: d=2a

Impact Value KCU, 20°C: > 59 J/sm²

Impact Value KCU after Ageing: > 29 J/sm²

Impact Value KCU, -40°C: > 34 J/sm²

Impact Value KCU, -70°C: > 29 J/sm²

295 strength class

Long products

Thickness: 20 - 32 mm ;

Yield Strength: > 295 MPa

Tensile Strength: > 430 MPa

Elongation: > 21 %

Return Bend: d=2a

Impact Value KCU after Ageing: > 29 J/sm²

Impact Value KCU, -40°C: > 29 J/sm²

Plates, sheets, strips, coils

Thickness: 20 - 32 mm ;

Yield Strength: > 295 MPa

Tensile Strength: > 430 MPa

Elongation: > 21 %

Return Bend: d=2a

Impact Value KCU, 20°C: > 59 J/sm²

Impact Value KCU after Ageing: > 29 J/sm²

Impact Value KCU, -40°C: > 29 J/sm²

Impact Value KCU, -70°C: > 24 J/sm²

315 strength class

Regulated or controlled rolling, or accelerated cooling.

Plates, sheets, strips, coils

Thickness: 20 - 60 mm ;

Yield Strength: > 315 MPa

Tensile Strength: > 450 MPa

Elongation: > 21 %

Return Bend: d=2a

09G2S Included in 22 standards (CIS Countries)

Impact Value KCU, 20°C: > 59 J/sm²
Impact Value KCU after Ageing: > 29 J/sm²
Impact Value KCU, -40°C: > 29 J/sm²
Impact Value KCU, -70°C: > 24 J/sm²

325 strength class

Long products

Thickness: < 5 mm ;

Yield Strength: > 325 MPa
Tensile Strength: > 450 MPa
Elongation: > 21 %
Return Bend: d=2a
Impact Value KCU, 20°C: > 64 J/sm²
Impact Value KCU after Ageing: > 29 J/sm²
Impact Value KCU, -40°C: > 34 J/sm²
Impact Value KCU, -70°C: > 34 J/sm²
Impact Value KCV, 0°C: > 34 J/sm²
Impact Value KCV, -20°C: > 34 J/sm²

Thickness: 5 - 10 mm ;

Yield Strength: > 325 MPa
Tensile Strength: > 450 MPa
Elongation: > 21 %
Return Bend: d=2a
Impact Value KCU, 20°C: > 64 J/sm²
Impact Value KCU after Ageing: > 29 J/sm²
Impact Value KCU, -40°C: > 39 J/sm²
Impact Value KCU, -70°C: > 34 J/sm²
Impact Value KCV, 0°C: > 34 J/sm²
Impact Value KCV, -20°C: > 34 J/sm²

Thickness: 10 - 20 mm ;

Yield Strength: > 325 MPa
Tensile Strength: > 450 MPa
Elongation: > 21 %
Return Bend: d=2a
Impact Value KCU, 20°C: > 59 J/sm²
Impact Value KCU after Ageing: > 29 J/sm²
Impact Value KCU, -40°C: > 39 J/sm²
Impact Value KCU, -70°C: > 29 J/sm²
Impact Value KCV, 0°C: > 34 J/sm²
Impact Value KCV, -20°C: > 34 J/sm²

09G2S Included in 22 standards (CIS Countries)

Plates, sheets, strips, coils

Thickness: 10 - 20 mm ;

Yield Strength: > 325 MPa
Tensile Strength: > 470 MPa
Elongation: > 21 %
Return Bend: d=2a
Impact Value KCU, 20 °C: > 59 J/sm²
Impact Value KCU after Ageing: > 29 J/sm²
Impact Value KCU, -40 °C: > 34 J/sm²
Impact Value KCU, -70 °C: > 29 J/sm²

345 strength class

Long products

Thickness: < 5 mm ;

Yield Strength: > 345 MPa
Tensile Strength: > 480 MPa
Elongation: > 21 %
Return Bend: d=2a
Impact Value KCU, 20 °C: > 64 J/sm²
Impact Value KCU after Ageing: > 29 J/sm²
Impact Value KCU, -40 °C: > 39 J/sm²
Impact Value KCU, -70 °C: > 34 J/sm²
Impact Value KCV, 0 °C: > 40 J/sm²
Impact Value KCV, -20 °C: > 40 J/sm²

Thickness: 5 - 10 mm ;

Yield Strength: > 345 MPa
Tensile Strength: > 480 MPa
Elongation: > 21 %
Return Bend: d=2a
Impact Value KCU, 20 °C: > 64 J/sm²
Impact Value KCU after Ageing: > 29 J/sm²
Impact Value KCU, -40 °C: > 39 J/sm²
Impact Value KCU, -70 °C: > 29 J/sm²
Impact Value KCV, 0 °C: > 40 J/sm²
Impact Value KCV, -20 °C: > 40 J/sm²

Plates, sheets, strips, coils

Thickness: < 5 mm ;

Yield Strength: > 345 MPa
Tensile Strength: > 490 MPa
Elongation: > 21 %

09G2S Included in 22 standards (CIS Countries)

Return Bend: d=2a

Impact Value KCU, 20°C: > 64 J/sm²

Impact Value KCU after Ageing: > 29 J/sm²

Impact Value KCU, -40°C: > 39 J/sm²

Impact Value KCU, -70°C: > 29 J/sm²

Thickness: 5 - 10 mm ;

Yield Strength: > 345 MPa

Tensile Strength: > 490 MPa

Elongation: > 21 %

Return Bend: d=2a

Impact Value KCU, 20°C: > 64 J/sm²

Impact Value KCU after Ageing: > 29 J/sm²

Impact Value KCU, -40°C: > 39 J/sm²

Impact Value KCU, -70°C: > 34 J/sm²

375 strength class

Regulated or controlled rolling, or accelerated cooling.

Plates, sheets, strips, coils

Thickness: 10 - 32 mm ;

Yield Strength: > 375 MPa

Tensile Strength: > 510 MPa

Elongation: > 20 %

Return Bend: d=2a

Impact Value KCU after Ageing: > 29 J/sm²

Impact Value KCU, -40°C: > 39 J/sm²

Impact Value KCU, -70°C: > 29 J/sm²