

STEEL

MATERIAL DATASHEET

Sheet Metal Materials

Measurement	S235	S355	S420	S500	S700
Density	7.85 g/cm ³	7.85 g/cm ³	7.75 g/cm ³	8.10 g/cm ³	7.95 g/cm ³
Yield Strenght	205 MPa	320 MPa	420 MPa	500 MPa	1035 MPa
Tensile Strenght	520 MPa	560 MPa	660 MPa	650 MPa	1150 MPa
Elongation	21 %	25 %	25 %	12 %	15 %
Hardness	120HB	220HB	255HB	280HB	355HB
Elasticity Modulus	200 GPa	190 GPa	200 GPa	220 GPa	200 GPa
Electrical Conductivity	1.82 m/Ω·mm ²	1.05 m/Ω·mm ²	0.95 m/Ω·mm ²	0.52 m/Ω·mm ²	0.7 m/Ω·mm ²
Thermal Exp. Coefficient	10 K-1·10-6	10 K-1·10-6	10.5 K-1·10-6	10.5 K-1·10-6	16.5 K-1·10-6
Thermal Conductivity	25 W/m·K	18 W/m·K	24.9 W/m·K	20.0 W/m·K	42.7 W/m·K
Specific Heat Capacity	460 J/kg·K	500 J/kg·K	460 J/kg·K	429 J/kg·K	477 J/kg·K

Mentioned information and mechanical properties in our datasheets are optimum values according to our manufacturing partners and are believed to be accurate, though is provided for your guidance only. All guarantees with respect to the information contained herein are explicitly denied.



ALUMINIUM

MATERIAL DATASHEET

Sheet Metal Materials

Measurement	AL5005	AL5083	AL5754	AL6082
Density	2.70 g/cm ³	2.66 g/cm ³	2.67 g/cm ³	2.70 g/cm ³
Yield Strenght	42 MPa	145 MPa	185 MPa	110 MPa
Tensile Strenght	124 MPa	290 MPa	245 MPa	205 MPa
Elongation	25 %	25 %	15 %	27 %
Hardness	28HB	77HB	75HB	84HB
Elasticity Modulus	69 GPa	71 GPa	70GPa	70 GPa
Electrical Conductivity	3.32 m/Ω·mm ²	5.98 m/Ω·mm ²	5.32 m/Ω·mm ²	3.80 m/Ω·mm ²
Thermal Conductivity	200 W/m·K	117 W/m·K	125 W/m·K	170 W/m·K
Specific Heat Capacity	900 J/kg·K	900 J/kg·K	900 J/kg·K	890 J/kg·K

Mentioned information and mechanical properties in our datasheets are optimum values according to our manufacturing partners and are believed to be accurate, though is provided for your guidance only. All guarantees with respect to the information contained herein are explicitly denied.



STAINLESS STEEL

MATERIAL DATASHEET

Sheet Metal Materials

Measurement	SS304	SS316L
Density	8.00 g/cm ³	8.00 g/cm ³
Yield Strenght	215 MPa	290 MPa
Tensile Strenght	505 MPa	580 MPa
Elongation	70 %	50 %
Hardness	123HB	79HB
Elasticity Modulus	193 GPa	205 GPa
Electrical Conductivity	7.20 m/Ω·mm ²	7.40 m/Ω·mm ²
Thermal Conductivity	16.2 W/m·K	16.3 W/m·K
Specific Heat Capacity	500 J/kg·K	500 J/kg·K

Mentioned information and mechanical properties in our datasheets are optimum values according to our manufacturing partners and are believed to be accurate, though is provided for your guidance only. All guarantees with respect to the information contained herein are explicitly denied.

