



Steel 1.0577 / S355J2 / St52

Key Features

Excellent weldability • High yield strength • Good machinability and formability • Cost-effective • Low-temperature toughness

Product Description

Steel 1.0577 (S355J2 / St52) is a highly versatile, unalloyed structural steel known for its excellent weldability, good machinability, and high yield strength. It features guaranteed impact resistance at sub-zero temperatures down to -20°C. Because of its reliable mechanical performance and formability, it is widely used in heavy machinery, construction frameworks, automotive engineering, and the manufacturing of load-bearing components like bridges and cranes.

Properties

Yield strength (Nominal thickness ≤ 16 mm)	355 MPa
Tensile strength (Nominal thickness < 3 mm)	510-680 MPa
Impact strength (-20°C; Nominal thickness ≤ 150 mm)	27 J
Fracture Elongation (≤ 1.50 mm)	13%
Hardness	150-190 HB
Elastic modulus	210 GPa
Density	7.85 g/cm ³
Thermal conductivity (W/m ² K)	40 - 45

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Applications

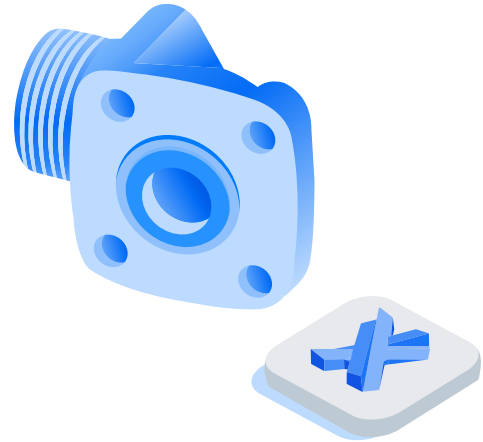
Construction & Infrastructure

Heavy Machinery

Automotive & Transportation

Shipbuilding

Energy Sector



Chemical Composition

Fe	Balance
C	0.20
Si	0.55
Mn	1.60
P	0.025
S	0.025
Cu	0.55

Reference

For more detailed source information, please consult the original document linked here: [1], [2], [3], [4] and [5]. We encourage users to verify the data's relevance and suitability for their specific needs.