

CARBON STEEL

S355 J2+N



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S355J2+N is a variant of S355 steel known for its enhanced impact properties at low temperatures, making it suitable for demanding applications where toughness is critical. Its combination of mechanical properties, ease of fabrication and weldability makes it a preferred choice for structural components requiring durability and reliability under various operating conditions. It complies with the standard EN 10025-2: 2004.

KEY FEATURES

- Enhanced toughness at low temperatures
- Good weldability
- Good resistance to wear and corrosion
- Can be welded using standard techniques
- Suitable for various cutting techniques

CHEMICAL PROPERTIES

Manganese (Mn)	Carbon (C)	Silicone (Si)	Phosphorus (P)	Sulphur (S)	Nitrogen (N)
1.6%	0.2%	0.55%	0.03%	0.03%	0.012%

MECHANICAL PROPERTIES

Tensile strength (N/mm ²)	470-630
Yield strength (N/mm ²)	355
Elongation (% in 4D)	20
Hardness - Rockwell (HRB) max	65-80
Hardness - Brinell (HB) max	145-190

PHYSICAL PROPERTIES

Density (kg/m ³)	7850	
Modulus of elasticity (Gpa)	210	
Mean coefficient of thermal expansion	0-100°C (µm/m/°C)	12.0
	0-350°C (µm/m/°C)	14.1
	0-538°C (µm/m/°C)	15.2
Thermal conductivity	at 100°C (W/m.K)	46.0
	at 500°C (W/m.K)	33.0
Specific Heat 0-100°C (J/kg.K)	490	
Electrical resistivity (nΩ.m)	160	
Melting point (°C)	1440	

MARKET SECTORS



Equipment & Machinery

Industrial equipment, general fabrication



Construction Applications

Beams, columns and girders in buildings and bridges



Oil & Gas Industry

Platforms, pipelines, structures for offshore and onshore



Infrastructure & Engineering

Building structural frameworks, support structures



Marine Equipment

Hulls, decks and super structures of ships



Power Generation

Frameworks and support structures for power plants