

CARBON STEEL

S275



S275

Carbon Steel S275, also known as S275JR, is a type of non-alloy structural steel with good tensile and yield strength, designed to be used in a wide variety of engineering and construction applications. S275 steel offers a balance of strength and ductility, making it a versatile choice for structural applications. It is part of the EN 10025-2 standard, which specifies the technical delivery conditions for non-alloy structural steels.

KEY FEATURES

- High strength
- Good weldability
- Excellent machinability
- 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%	0.25%	0.05%	0.045%	0.045%	0.014%

MECHANICAL PROPERTIES

Tensile strength (N/mm ²)	370-530
Yield strength (N/mm ²)	275
Elongation (% in 4D)	23
Hardness - Rockwell (HRB) max	65-80
Hardness - Brinell (HB) max	120-180

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



Engineering & Machinery

Frames, supports, base plates, gussets



Construction Applications

Beams, columns and girders in buildings and bridges



Oil & Gas Industry

Platforms, pipelines, structures for offshore and onshore



Automotive Industry

Chassis, frames, structural parts for trucks and trailers



Marine Equipment

Plates and sections for hull structures, components for decks



Power Generation

Frameworks and support structures for wind turbines



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