

Data Sheet: Steel 1.0038

(S235JR)

Alternative Designations

Standard	EN	ANSI/AA	AFNOR	JIS	SIS	UNE
Designation	EN 10025	A283	A 33	SN490B;C		A310-0

Details

This is a hot rolled pure structural steel. With good plasticity, toughness and weldability, it has a lower yield strength of 235MPa. This material can be formed into many products such as I beams, channels, plates, angle bars etc. its excellent weldability makes it to be widely used in bridges, transmission towers etc. It is equivalent to Fe360B

Key Features

Good plasticity • Tough • Good weldability

Chemical Composition

Element	C	Si	Mn	P	S	Cu	N		
Percentage	0.17		1.40	0.035	0.035	0.55	0.012		

Mechanical Properties

Property	Yield strength [MPa]	Ultimate tensile strength [MPa]	Elongation [%]	Hardness
Value	175 - 235	340 - 520	21	120

Physical Properties

Property	Value
Density [g/cm ³]	7.85
Module of elasticity [GPa]	200
Electrical conductivity [m/Ω · mm ²]	1.82
Coefficient of thermal expansion [K ⁻¹ · 10 ⁻⁶]	10
Thermal conductivity [W/m · K]	25
Specific heat capacity [J/kg · K]	460

Reference

Datasheets provided by Xometry contain materials sourced through trusted OEMs, material distributors, and databases. Please visit [Materialdatacenter.com](https://www.materialdatacenter.com) for further information on this material.