

# 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

## Datasheet ▸

### Physical Properties

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

Xometry®