

ASTM A588 structural steel

A588 steel is well known for its weathering ability. When exposed to external conditions, its corrosion-resistant properties become stronger, even when unpainted. A588 steel has four times as much corrosion resistance as carbon steel. And A588 has a wide range of applications that include transmission and phone towers, freight cars, bridge and highway structures and guardrails because of the self-repairing, natural oxide patina greatly reduces maintenance. This steel also maintains an excellent strength-to-weight ratio, meeting the strength requirements of carbon steel while weighing much less.

The Mechanical Properties of A588

Steel grade	Minimum yield strength	Tensile strength	Minimum elongation - A
	MPa	MPa	
A588	290-345	435-485	18-21

The Chemical Composition of A588

Steel grade	C	Si	Mn	P	S	Cu	Cr	Ni
	max.	%	%	max.	max.	%	%	%
	%			%	%			
A588	0.19	0.15-0.4	0.8 - 1.35	0.04	0.05	0.2 - 0.50	0.3 - 0.5	0.25-0.5