



A/SA 193M covers alloy and stainless steel bolting material for pressure vessels, valves, flanges and fittings for high-temperature service. The term "bolting material" as used in A/SA 193M covers bars, bolts, screws, studs, stud bolts and wire. Several grades are covered in A/SA 193M including ferritic steels and austenitic stainless steels designated B5,B8, etc. Selection will depend upon design, service conditios, mechanical properties and high-temperature characteristics. A/SA 193M is expressed in both inch-pound units and in SI units.

## **Chemical Properties**

С	Si	Mn	P	S	Cr	Ni
0.08 Max	1.00 Max	2.00 Max	0.045 Max	0.030 Max	18.0-20.0	8.0-11.0

## **Mechanical Properties**

Yeild strength	Yeild strength Tensile strength		Reduction	Hardness
Mpa	Мра	%	%	HRC
min	min	min	min	max.
690	860	12	35	35

## **Heat Treatment**

Carbide Solution Treated & Strain Hardened.

## **Equivalent Designation**

UNS \$30400				
EN number 1.4547				
EN name X1CrNiMoCuN20-18-7				
W.Nr. 1.4529**				
SS 2378*				
AFNOR Z1 CNDU 20.18.06AZ*				



TorqBolt Inc

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