



## STAINLESS STEEL SA-351 GRADE CF3M

CF3M is a molybdenum bearing modification of CF3 Austenitic Steel alloy and is the cast equivalent of wrought AISI 316L stainless steel. It is the low-carbon modification of CF8M. The presence of molybdenum increases the general corrosion resistance and the resistance to pitting by chlorides.

CF3M has similar corrosion resistance and mechanical properties to CF8M. The difference is that the tensile yield strength of CF3M is somewhat less than that of CF8M at ambient temperatures. CF3M alloy is limited to a maximum temperature of 800F. Applications for the low carbon version (CF3M) would include valve bodies, pump casings, flanges, fittings and other pressure-containing parts where excellent corrosion resistance is required and should be used for parts that will be welded and cannot be solution annealed after welding.

### Chemical Composition

Element		%
Carbon	C	0.03 maximum
Silicon	Si	1.5 maximum
Manganese	Mn	1.5 maximum
Phosphorus	P	0.04 maximum
Sulphur	S	0.04 maximum
Chromium	Cr	17 - 21
Nickel	Ni	9 - 13
Molybdenum	Mo	2 - 3

### Heat Treatment

1040°C min. followed by a quench in water or rapid cool by other means

### Typical Mechanical Properties

Tensile Strength	485 MPa min.
Yield Strength	205 MPa min.
Elongation (in 50mm)	30 % min.

### Comparative Specifications

Material	Country/Standards
A 351 Grade CF3M	USA/ASTM
SA-351 Grade CF3M	USA/ASTM
SCS 16A	Japan / JIS
1.4409	European Union/EN
J92800	USA/UNS

**To discuss your requirements, call a member of NovaCast's team on +44 (0) 1225 707466, or email [sales@novacast.co.uk](mailto:sales@novacast.co.uk)**

All information in our data sheets and website is indicative only and is not intended to be a substitute for the full specification from which it is extracted. It is intended to provide typical values to allow comparison between metal alloy options rather than a definitive statement of mechanical performance or suitability for a particular application as these will vary with temperature, product type and product application. It is presented apart from contractual obligations and does not constitute any guarantee of properties or of processing or application possibilities in individual cases. Our warranties and liabilities are stated exclusively in our terms of trading.

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