

ALLOY DATA SHEET CF 8M

CORROSION RESISTANT ALLOY

REVISION: 01/90

DESCRIPTION

CF-8M is a molybdenum bearing modification of of CF8 alloy and is the cast equivalent of wrought AISI 316 stainless steel. The presence of molybdenum increases the general corrosion resistance and the resistance to pitting by chlorides. The alloy is used in mildly acidic and alkaline conditions and for handling citric, oxalic and phosphoric acids.

COMPOSITION

	<u>C</u>	<u>Mn</u>	<u>Si</u>	<u>Cr</u>	<u>Ni</u>	<u>Mo</u>	<u>P</u>	<u>S</u>
Min %				18	9	2.0		
Max %	0.08	1.50	2.0(i)	21	12	3.0	0.04	0.04

Notes (i) Silicon 1.5% Max in ASTM A351

APPLICATIONS

Impellers, propellers, pump casings, valve bodies, press plates.

PRODUCT FORMS

Horizontal and vertical centrifugal castings; static castings.

PHYSICAL PROPERTIES

Density (lbs/in ³)	0.280
Liquidus(°F)	2550
Thermal Conductivity (Btu/h/ft ² /ft/°F)	9.4 @ 212°F 12.3 @ 1000°F
Thermal Expansion (10 ⁻⁶ in/in °F)	8.9 @ 70-212°F 9.7 @ 70-1000°F
Magnetic Permeability	1.5-2.5

MECHANICAL PROPERTIES

(Typical Values at Room Temperature - Solution Annealed at 1950-2100°F, Water Quenched.)

			<u>ASTM Specs A351, A743 & A744</u>
U.T.S.	K.S.I.	80.0	70 Min
Y.S.	K.S.I.	42.0	30 Min
Elong.	%	50	30 Min
Brinell	H B	156-170	
Charpy 'Key'	ft-lbs	52 @ -400°F	

