MULTIAlloys

ADDING VALUE THROUGH EXPERIENCE

16Mo3

ALLOY INFORMATION SHEET | W Nr 1.5415

HEAT AND/OR CREEP RESISTANT | CORROSION RESISTANT | OTHER

16Mo3 falls into a general category of steels that is variously referred to as creep resistant steels or pressure vessel steels or "Chrome – Moly's". It is a low alloy steel deriving its mechanical properties from its carbon and molybdenum contents. Molybdenum in solid solution reduces the creep rate of steel.

This form of mechanical damage may arise if the material is exposed to elevated temperatures and high pressure for an extended period. Such conditions may exist in boilers and elsewhere in the power generation industry and petro-chemical plants. 16Mo3 has useful creep properties up to about 500°C.

16Mo3 is produced in the form of plate, pipe and bar. It may be supplied in the as rolled condition but mechanical property determination is done with the metal in the normalised condition.

NOTE 1: *16Mo3 replaced the grade 15Mo3 which was covered by DIN 17 155 when this standard was superseded by EN 11028-2 which was introduced in 1992.*

NOTE 2: *GrA (ASTM A204 for plate) and P2 (ASTM A335 for pipe) are similar to 16Mo3 but with a slightly higher molybdenum contents. 16Mo3 is thus not a direct equivalent or substitute for the ASTM grades.*

COMPOSITION (%) * = Maximum									
	C	Si	Mn	P/S*	Al	Cr*	Cu*	Mo	Ni*
16Mo3	0.12-0.20	0.10-0.35	0.40-0.90	0.035/ 0.030	#	0.30	0.30	0.25-0.35	0.30

 # Must be determined and stated on inspection certificate

APPLICABLE SPECIFICATIONS	
PLATE, SHEET & STRIP	EN 10028
PIPE	EN 10216
BAR	EN 10273
CASTINGS	
FORGINGS	
FITTINGS	
WELDING CONSUMABLES	

*PLEASE CALL FOR DETAILS OF **STOCK, DELIVERY AND PRICE***

MECHANICAL PROPERTIES #	
TENSILE STRENGTH (MPa) (min)	440
0.2% PROOF STRENGTH (MPa) (min)	275
ELONGATION (% in 50mm) (min)	22%
HARDNESS (Brinell)	
CHARPY V (J) (min at 20°C)	31

 # Metal tested in the normalised condition.

TYPICAL PHYSICAL PROPERTIES #	
DENSITY (kg / cu m.)	7850
YOUNGS MODULUS (GPa)	190
THERMAL CONDUCTIVITY (W/m.°C)	49
THERMAL EXPANSION (per °C)	0.000013

 # - At room temperature

Detailed technical data available upon request

Note: Data shown are typical and full research should be done to determine the usefulness in any application or design.
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Multi Alloys is a division of **EMVAfrica** | **www.multialloys.co.za**
Gauteng: T: + 27 (0)11 466 2480 or E: sales@multialloys.co.za
Western Cape: T: + 27 (0)21 982 1060 | E: sales-cape@multialloys.co.za

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