

VDM® Alloy N10675

Description

VDM® Alloy N10675 is a high corrosion resistant nickel-molybdenum Alloy. This alloy is characterized by a high resistance against hydrochloric acid and other reducing media in a wide range of temperature and concentration. In comparison to alloy B-2 VDM® Alloy N10675 shows an improved thermal stability against precipitation of intermetallic phases in the temperature range between 500 and 800 °C (932 and 1,472 °F).

Designations and standards

Standard	Material designation
EN	2.4600 – NiMo29C
UNS number	N10675
VdTÜV	517
DIN	17744
ASTM	B 333

Nominal composition (weight - %) acc. VdTÜV sheet 517, ASTM B-333

	Ni	Cr	Fe	C	Mn	Si	Cu	Mo	Co	Al	W
Min.	Bal.	1.0	1.0					27			
Max.		3.0	3.0	0.01	3.0	0.1	0.2	32	3.0	0.05	3

Mechanical properties (N/mm², %)

	R _{p 0.2}	R _m	R _{p 1.0}	A %
Plate solution annealed (4.76 – 40 mm) traverse	min 340	700 – 1,000	380	40

Physical properties at room temperature

Density	(g/cm ³)	9.22				
Modulus of elasticity	(kN/mm ²)	217				
Thermal conductivity	(°C/°F)	20 (68)	100 (212)	200 (392)	300 (572)	400 (752)
	(W/mK)	11.1	12.2	13.4	14.6	16.0

Processing

Melting temperature	(°C/F)	1,370 – 1,418 °C / 2,500 – 2,585 °F
Formability		good
Weldability		good
Solution annealing	1,050 – 1,080 °C (1,922 – 1,976 °F)	after annealing, rapid quenching

Typical applications

CPI Process media with hydrochloric acid, acetic acid, formic acid, phosphoric acid, sulfuric acid

Legal notice

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