



Characteristics and scope of application

- Filler metal for FeNSG-AHe6 and similar grades
- Joining of low thermal expansion alloys used for molds required in the production of high precision composite components
- Nb modification of standard FeNSG-AHe6 filler metal assures crack free welding

Standard designations

DIN 17745	AWS	DIN Mat.-No.
-	-	-

Typical chemical composition of filler metal

	C	Si	Mn	Ti	Nb	Fe	Ni
Mass %	0.2	0.15	0.4	0.2	1.3	Bal.	36

All weld metal properties (min. values at rt)

Heat treatment	Yield strength	Tensile strength	Elongation	Impact toughness	
	R _{p0.2}	R _m	A ₅	ISO-V	
as welded	350 MPa	490 MPa	20%	80 J	

Coefficient of thermal expansion (CTE)

Temperature T	°C	100	150	200	300	400	450	500	550	600
CTE 20°C - T	10 ⁻⁷ /K	23	26	31	58	84	94	102	109	114

Welding instructions

Polarity	Shielding gas acc. to AWS A5.32
DC / +	SG-A, SG-AHe, SG-AH (max. 5% H ₂)
DC / -	SG-A, SG-AHe, SG-AH (max. 5% H ₂)
Low heat input and interpass temperature <266°F. Stringer bead technique recommended.	
Base materials	
1.3912 – Alloy 36 – UNS K93600, 1.3981 – Alloy K – UNS K94610	

Packaging (tolerances acc. to AWS A5.02)

Approvals on request

Diameter (in)		lbs/PU
1/16 - 1/8	x 36 in	11 / 22
0.8 / 1.0 / 1.2	BS 300 spool	33
1.6 / 2.4 / 3.2	K 415 / K 435 spool	55