



Characteristics and scope of application

- Filler metal for FeNi36 and similar grades
- Joining of low thermal expansion alloys used for moulds required in the production of high precision composite components
- Nb modification of standard FeNi36 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 DIN EN ISO 14175
DC / +	I1, I3, R1 (max. 5% H ₂)
DC / -	I1, I3, R1 (max. 5% H ₂)
Low heat input and interpass temperature <130°C. Stringer bead technique recommended.	
Base materials 1.3912 – Alloy 36 – UNS K93600, 1.3981 – Alloy K – UNS K94610	

Packaging (tolerances acc. to DIN EN ISO 544)

Approvals on request

Diameter (mm)		Kg
1.6 / 2.0 / 2.4 / 3.2	X 1000 mm	5 / 10
0.8 / 1.0 / 1.2	BS 300 spool	15
1.6 / 2.4 / 3.2	K 415 / K 435 spool	25