



Characteristics and scope of application

- Wire for Additive Manufacturing of components with low coefficient of thermal expansion used for molds required in the production of high precision composite components
- Nb modification of standard FeNi36 composition assures crack free deposition.

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.	36.0

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)

Temperatur 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

Prozessdetails

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.

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