

Classifications

AWS A5.11 / SFA-5.11	EN ISO 14172	Material-No.
ENi-1	E Ni 2061 (NiTi3)	2.4156

Characteristics and typical fields of application

UTP 80 Ni is suited for joining and surfacing on commercial pure nickel grades, including LC nickel, nickel alloys and nickel-clad steels. These materials are employed primarily in the construction of pressure vessels and apparatus in the chemical industry, in the food industry and for power generation, where good behaviour under corrosion and temperature is demanded.

UTP 80 Ni is weldable in all positions, except vertical-down, and gives smooth, notch-free seams.


Typical analysis

	C	Si	Mn	Ni	Ti	Fe	Al
wt.-%	< 0.02	0.8	0.25	bal.	2.0	0.1	0.2

Mechanical properties of all-weld metal - typical values (min. values)

Yield strength $R_{p0.2}$	Tensile strength R_m	Elongation A ($L_0=5d_0$)	Impact energy ISO-V KV J
MPa	MPa	%	J
>300	>450	>30	>160

Operating data

	Polarity	DC +	Dimension mm	Current A
	Redrying	250 - 300°C / 2 - 3 h	2.5 × 300 *	60 – 85
			3.2 × 300	90 – 130
			4.0 × 350	110 – 150

* available on request

Welding instructions

Weld with dry stick electrodes only! Prior to welding the stick electrodes must be dried 2-3 hours at 250-300° C. Clean the weld zone thoroughly. The V angle of the seam should not be less than 70°. Weld with short arc, avoiding weaving as much as possible.

Approvals

TÜV (No. 00190)