

Classifications

EN ISO 14172	Material-No.
E NiZ (NiCr29Fe26Mo)	2.4653

Characteristics and typical fields of application

Nickel-base electrode of E Ni 8025 type for welding on DC+ and AC. Max. service temperature 450°C. Good corrosion resistance, especially in reducing environments. In terms of hot cracking resistance (and corrosion resistance), Thermanit 30/40 EW is superior to the fully austenitic 20 25 5 Cu L / 385 and 25 22 2 N L / 310 (mod.) filler metals. For joining and surfacing work with matching and similar, unstabilized and stabilized fully austenitic steels and cast steel grades containing Mo (and Cu). For joining of mentioned steels to unalloyed / low-alloyed steels.

Base materials

1.4465 X1CrNiMoN25-25-2, 1.4563 X1NiCrMoCu31-27-4, 1.4577 X5CrNiMoTi25-25, 2.4858 NiCr21Mo

Typical analysis


	C	Si	Mn	Cr	Ni	Mo	Cu
wt.-%	< 0.03	< 0.9	1.5	28.0	36.0	4.3	1.8

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

Condition	Yield strength $R_{p0.2}$	Tensile strength R_m	Elongation A ($L_0=5d_0$)	Impact energy ISO-V KV J
	MPa	MPa	%	20°C
u	≥ 350	≥ 550	30	50

u untreated, as-welded

Operating data

	Polarity	DC+ / AC	Dimension mm	Current A
	Electrode identification	Thermanit 30/40 EW E Ni Z (NiCr29Fe26Mo)	2.5 × 300	55 – 80
	Redrying	250-300°C / 2h	3.2 × 350	60 – 110
			4.0 × 350	90 – 150

Suggested heat input is max. 1.0 kJ/mm and interpass temperature max. 100°C. Post-weld heat treatment generally not needed. In special cases, solution annealing can be performed at 1120°C. For dissimilar joints preheating temperature as required by the base material.

Approvals

TÜV (04587.)