

## Classifications

EN ISO 14172	Mat. No.
E NiZ (NiCr29Fe26Mo)	2.4653

## Characteristics and typical fields of application

Stainless; resistant to intercrystalline corrosion – wet corrosion up to 450 °C (842 °F).  
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 X 6 NiCrCuNb 20 18 and X 5 CrNiMoNb 25 25 welding filler metals, which are very sensitive to hot cracking. For joining and surfacing work with matching and similar, non stabilized and stabilized fully austenitic steels / cast steel grades containing Mo (and Cu). For joining

## Base materials

TÜV certified parent metals  
1.4465 – X1CrNiMoN25-25-2; 1.4563 – X1NiCrMoCu31-27-4  
1.4577 – X5CrNiMoTi25-25; 2.4858 – NiCr21Mo

## Typical analysis of all-weld metal (wt.-%)

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

**Structure:** Austenite

## Mechanical properties of all-weld metal

Heat-treatment	Yield strength R <sub>p0.2</sub>	Yield strength R <sub>p1.0</sub>	Tensile strength R <sub>m</sub>	Elongation A (L <sub>0</sub> =5d <sub>0</sub> )	Impact work ISO-V KV J
	MPa	MPa	MPa	%	+20 °C
aw	350	370	550	30	50

## Operating data

	<b>Polarity:</b> DC ( + ) / AC	<b>ø (mm)</b> 2.5 3.2 4.0	<b>L mm</b> 300 350 350	<b>Amps A</b> 50 – 80 60 – 110 90 – 150
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## Welding instruction

Materials	Preheating	Postweld heat treatment
Matching metals	None (weld as cold as possible) cooling in air	Mostly none; if necessary solution annealing at 1120 °C (2048 °F)
Joining of matching austenitic steels to unalloyed / low alloy steels / cast steel grades	According to parent metal	None

## Approvals

TÜV (04587), CE