

## Classifications

AWS A5.14 / SFA-5.14

EN ISO 18274

ERNiCrMo-14

S Ni 6686 (NiCr21Mo16W4)

## Characteristics and typical fields of application

Nickel-base solid wire TIG rod of S Ni 6686 (NiCr21Mo16W4) / ERNiCrMo-14 type for joining and surfacing on matching and similar wrought and cast alloys. For welding the cladded side of plates of matching and similar alloys e.g. flue gas desulfurization scrubber. High corrosion resistance in reducing and oxidizing environments.

## Base materials

2.4602 NiCr21Mo14W, 2.4605 NiCr23Mo16Al, 2.4606 NiCr21Mo16W, 2.4819 NiMo16Cr15W  
 UNS N06022, N06059, N06686, N10276  
 Alloy 22, Alloy 59, Alloy 686, Alloy C-276  
 16Mo3

## Typical analysis

	C	Si	Mn	Cr	Ni	Mo	W	Fe	Al
wt.-%	0.01	0.1	< 0.5	22.8	Bal.	16.0	3.8	< 1.0	0.3

## 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	450	760	30	50

u untreated, as-welded – shielding gas Ar

## Operating data



Dimension mm	Current A	Voltage V
1.6 × 1000	80 – 120	10 – 13
2.0 × 1000	100 – 130	14 – 16
2.4 × 1000	130 – 160	16 – 18

Heat input max. 1.0 kJ/mm, interpass temperature max. 100°C.

Post-weld heat treatment generally not needed. In special cases, solution annealing can be performed at min. 1180°C followed by water quenching.

Shielding gas: Ar or Ar + 2% H<sub>2</sub>. Gas flow: 8 – 12 l/min.

Polarity: DC-

## Approvals

-