

Classifications

EN ISO 12153	AWS A5.34	AWS A5.34M
T Ni 6082 R M21 3	ENiCr3T0-4	TNi6082-04

Characteristics and typical fields of application

Thermanit TG Nicro 82 is a rutile basic flux cored wire mainly designed for flat and horizontal welding position. Easy handling and high deposition rate of this wire are leading to high productivity with brilliant welding properties. It produces self detaching slag, almost spatter and weld oxidation-free welding, fine bead appearance with good sidewall wetting and secure penetration. This in turn offers savings in technical processing time and costs as well as lower cleaning and pickling.

This cored wire ensures a reliably high quality standard as well as high safety to avoid welding imperfections. In addition to that it is useable for high-quality welds of nickel-base alloys, high temperature, heat-resistant, cryogenic materials, difficult-to-weld steels and mixed structures. Furthermore it is useable for ferrite austenite joint welding at service temperatures above 300°C (572 °F) or with post weld heat treatment.

This wire is designed for applications in pressure vessel constructions for temperatures from -196°C (-320.8 °F) up to 550°C (1022 °F). It is resistant to scaling up to 1200°C (2192 °F) (sulfur free atmosphere).

At high temperatures C-diffusion is almost averted, it is insensitive to embrittlement. Additionally it is thermal shock resistant, stainless and fully austenitic with low coefficient of expansion. In few particular cases pulsed arc welding offers an advantage for out-of-position

Base materials

2.4816 – Ni Cr 15 Fe, 2.4817 – LC-NiCr 15 Fe, Inconel 600, Inconel 600L, Nickel and Nickelalloys, low temperature steels up to 5 % Ni-steels, unalloyed and alloyed, high-temperature, creep resistant, high alloyed Cr- and CrNiMo-steels particularly for joint welding of dissimilar steels, and nickel to steel combinations; also recommended for Alloy 800.

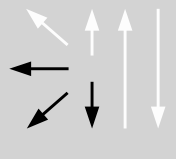
Typical analysis of all-weld metal (wt.-%)

	C	Si	Mn	Cr	Ni	Nb	Fe
wt-%	0.03	0.4	3.2	19.5	Bal.	2.5	2.0

Mechanical properties of all-weld metal

Heat-treatment	Yield strength R _{p0.2}	Tensile strength R _m	Elongation A (L ₀ =5d ₀)	Impact work ISO-V KV J	
	MPa	MPa	%	+20 °C	-196 °C
aw	360	600	30	110	80

Operating data

	Polarity: DC (+)	Shielding gas: (EN ISO 14175) M21 Consumption: 15 – 18 l/min	ø (mm) 1.2	Spool B300	Amps A 110 – 210	Voltage V 20 – 30
---	------------------------------	---	----------------------	----------------------	----------------------------	-----------------------------

Approvals

TÜV (11911), CE