

Cored Wires

Mild Steel Metal Cored Wire

Corofil R59Ni

Classifications Weld Metal

SFA/AWS A5.29	E81T1-Ni1M
EN ISO 17632-A	T 46 3 1Ni P C 2 H5
EN ISO 17632-A	T 46 4 1Ni P M 2 H5

Description and applications

Corofil R59Ni is a rutile flux-cored wire designed to give spray transfer, all-positional welding for both single and multi-run welds. The nominal 1% nickel weld metal has excellent toughness down to -40°C.

Approvals

ABS : 3YSA (M21)	DNV : IV YMS H10 (M21)	MOD : MS>25mm
BV : SA3YM (M21)	MOD : MS>25mm	(Navy): B&BX>12mm
CE : EN 13479		

Typical all-weld mechanical properties under shielding gas of 80 Ar/20 CO₂

Chemical Composition

All Weld Metal %
M21 Shielding gas

	Min	Max
C	0.04	0.08
Si	0.20	0.50
Mn	0.90	1.40
P		0.020
S		0.020
Cr		0.10
Ni	0.80	1.10
Mo		0.05
V		0.05
Nb		0.03
Cu		0.10
Al		0.05
Sn		0.02
Ti	0.02	0.06
Pb		0.010
As		0.010
Sb		0.010
B	0.003	0.007
N		0.008
O	0.30	0.10

Mechanical Properties of Weld Metal

All Weld Metal (%)
M21 shielding gas
As Welded

Properties	Min	Max	Typ
ReL (MPa)	470		560
Rm (MPa)	560	650	600
A5 (%)	22		25
Charpy V At -20°C (J)	54		130
Charpy V At -30°C (J)			120
Charpy V At -40°C (J)	75		110

Current range	DC + with shielding gas 15-20 l/min Ar/20%CO ₂	
Size (mm)	1.2	1.6
Current (amps)	110-300	150-360