

Low temperature rutile cored wire

Classification

AWS A5.29/A5.29M :E81T1-Ni1M- JH4 all diameters
 EN 758 :T 50 5 1 Ni P M 2 H5 only diameter 1,2 mm

General description

All position gas shielded 1% Ni flux cored wire, offshore and similar applications
 Superior weldability, low spatter, good bead appearance, outstanding operators appeal
 Exceptional mechanical properties
 Very low hydrogen $H_{DM} < 5 \text{ ml/100g}$
 Superior product consistency with optimal alloy control
 Excellent wire feeding

Welding positions



ISO/ASME PA/1G PB/2F PC/2G PF/3G up PG/3G down PE/4G

Current type / Shielding gases

DC +
 Ar+(>5-25%) CO₂ (EN 439: M21)
 15-25 l/min

Approvals

Shielding gases	ABS	BV	FORCE	GL	LR	RINA
M21	SA3,3YMHH	IVYMSH5	+	4YH10S	4Y40SH5	4YSH5

Typical chemical composition of all weld metal, (w%)

Shielding gases	C	Mn	Si	P	S	Ni	$H_{DM} \text{ ml/100g}$
M21	0.05	1.4	0.2	0.013	0.010	0.95	3

Mechanical properties of all weld metal

	Shielding gas	Condition	Yield strength (N/mm ²)	Tensile strength (N/mm ²)	Elongation (%)	Impact (ISO), J	
						-40°C	-50°C
Required	AWS A5.29 EN 758		min.470 min.500	550-690 560-720	min. 19 min. 18	min. 27	min.47
Typical values after welding	M21	AW	530	600	24	90	60

Packaging, available sizes and identification

Unit type	Net weight/unit		Diameter (mm)	
	(kg)		1.2	1.6
Plastic spool S200	4.5		X	
Wire reel B300	15		X	X
Wire reel B435	25			X

Identification Imprint: Revicod®81T1-Ni1M

Revicod®81T1-Ni1M: rev. EN 20

Materials to be welded

Steel	Code	Type
General structural steel	EN 10025	S185, S235, S275, S355
Ship plates	ASTM 131	Grade A, B, D, AH32 to EH40
Cast steel	EN 10213-2	G P 240R
Pipe material	EN 10208-1	L210, L240, L290, L360
	EN 10208-2	L240NB, L290NB, L360NB, L360QB, L240MB L290MB, L360MB, L415MB, L415NB
	API 5LX	X42, X46, X52, X60
	EN 10216-1/ EN 10217-1	P235T1, P235T2, P275T1 P275T2, P355N
	EN 10028-2	P235GH, P265GH, P295GH, P355GH
Boiler & pressure vessel steel	EN 10113-2	S275, S275, S355, S420
Fine grained steel	EN 10113-3	S275, S355, S420, S460

Calculation data

Diameter (mm)	Electrode Stick-out (mm)	Wire feed speed (cm/min)	Current (A)	Arc Voltage (B)	Deposition Rate (kg/h)	kg Wire/kg weld metal
1.2	20	445	130	20-22	1.6	1.20
		700	180	23-25	2.5	1.20
		950	220	25-27	3.4	1.20
		1270	265	27-29	4.5	1.20
		1590	305	30-32	5.9	1.20
1.6	20	320	170	21-23	1.9	1.20
		510	235	22-24	3.1	1.20
		635	275	24-25	3.9	1.20
		760	310	25-27	4.7	1.20
		890	350	27-29	5.6	1.20
		1015	385	28-30	6.4	1.20
		1080	400	30-31	6.8	1.20

Welding parameters, optimum fill, Shielding gases Ar+ (>5-25)%CO₂

Diameter (mm)	Current / Voltage	Welding position				
		PA/1G	PB/2F	PC/2G	PF/3Gup	PE/4G
1.2	(A)	230-280	230-280	200-240	200-240	160-220
	(V)	26-32	26-32	25-32	25-28	23-28
1.6	(A)	250-350	250-350	230-280	220-260	170-240
	(V)	24-32	24-32	24-32	24-28	22-28