

SL-81T

Seamless FCAW Wire

For MIG/MAG Cored Wires C-Mn & low alloy steels

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SL SERIES
SEAMLESS WELDING

Betaweld SL-81T is a seamless copper coated rutile flux cored wire for gas shielded metal arc welding of unalloyed steels for operating temperatures from -40°C up 450°C. The enhanced degree of fill provides a higher current carrying capacity and deposition rate. It can be applied in all positions with only one parameter setting (24V/Wire feed @ 9.0m per min/1.2mm wire). The weld metal produced features excellent mechanical properties and hydrogen content of <5ml per 100g deposited weld metal. Low spatter and easy slag removal, finely rippled and pore free welds are produced without undercut. To be used with mixed gas.

Conformance	
AS/NZS ISO	17632-B: T554T1-1MA-N1UH5
EN ISO	17632-A: U 46 4 1Ni P M 1 H5
AWS	A5.36: E81T12-M21A2-Ni1-H4

Approvals	Grade
ABS	3Y46SA H5
BV	SA4Y46M H5
DB	•
DNV	IVY46MS H5

Approvals	Grade
GL	4Y46H5S
LRS	4Y46S H5
RMRS	4Y46S H5
TÜV	•



Manufactured in Europe

Current condition and welding position	
DC+	
PA	PB
PC	PD
PE	PF
PG	



Chemical analysis (Typical values in %)

C	Mn	Si	P	S	Ni
0.06	1.3	0.4	≤ 0.010	≤ 0.010	≤ 1.0

Shielding Gas - EN ISO 14175 : M21

Materials

S(P)275-S(P)460

X42 - X70

Storage

Keep dry and avoid condensation

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength (MPa)	Tensile Strength (MPa)	Elongation A5 (%)	Impact Energy ISO - V (J) -40 °C
As Welded	≥ 470	550-680	≥ 24	≥ 60
580 °C x 2 h/f.	≥ 470	550-680	≥ 24	≥ 47

Gas test: 82% Ar+18% CO2

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SL-81T Operating Data

Wire Dia (mm)	Current Range	Voltage Range	Stickout (ESO)	Optimum Amperage	Voltage	Welding Positions
1.2mm	250-330	27-31	20-25	280A	31V	Flat
1.6mm	350-400	27-31	25-30	360A	31V	Flat
1.2mm	230-280	26-30	20-25	260A	28V	HV Fillet
1.6mm	310-360	26-30	25-30	320A	29V	HV Fillet
1.2mm	170-220	24-28	15-20	200A	24V	Vertical Up
1.6mm	200-250	24-28	15-20	240A	25V	Vertical Up
1.2mm	160-210	24-28	15-20	200A	24V	Overhead
1.6mm	190-240	24-27	15-20	220A	24V	Overhead

This operating data is given as a guide only. Actual settings will depend on the machine, material thickness, gas used and the operator techniques.

SL-81T Packaging Data

Part No	Wire Diameter (mm)	Pack Description	Weight	Pallet Size
2145	1.2mm	Spool/Carton	15kg	62 Spools
2146	1.6mm	Spool/Carton	15kg	62 Spools

