KOBELCO

FAMILIARC™ MG-51T

Mild steel solid wire for GMAW process
AWS A5.18 ER70S-6

Features and typical fields of application

- MG-51T is a 70ksi class mild steel solid wire for Gas Metal Arc Welding process works with either straight CO2 or Ar-CO2 mixed gas.
- Its excellent wire feeding provides trouble-free welding for manual and automatic welding and ensures long life of contact tips and conduit liners.
- Kink-free packages will helps to prevent from unexpected stuck during welding process which comes from well optimized wire stacking sequences especially for drum products.
- MG-51T also offers all-positional welding with short circuit arc process at lower welding current, and arc voltage range.

Contact Tip Abrasion

0.045" wire welded at 250A for 2 hours

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Conventional wire

Typical chemical composition of wire/weld metal per AWS A5.18

	Shielding gas	C	Si	Mn	P	S
Wire	N/A	0.10	0.88	1.56	0.011	0.012
Deposited metal	80%Ar-20%CO_2	0.10	0.64	1.26	0.011	0.012
	100% CO_2	0.11	0.53	1.15	0.011	0.012

Typical mechanical property of weld metal per AWS A5.18

Shielding Gas	0.2% PS (psi)	TS (psi)	EL (%)	CVN at -20F° (ft-Lbs)
80%Ar-20%CO_2	74,800	87,300	31	66
100% CO_2	68,600	81,800	32	52

Size & Packages

Wire Dia.	0.035", 0.045"	Package	44Lbs spool , 550Lbs drum

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Recommended welding conditions and depostion rate with 75-80%Ar-bal.CO_2

Wire Dia.	Wire Feed Speed (in./min)	Current (A)	Arc Voltage (V)	Deposition Rate (Lbs/hr)	Wire Stick-Out	Shielding Gas flow rate (CFH)
0.035”	75	60	14-15	1.2	3/8-5/8”	34-35
	110	80	15-16	1.8		
	150	100	16-17	2.4		
	190	120	17-18	3.0		
	235	140	18-19	3.7		
0.045”	105	100	17-19	3.4	5/8-3/4”	40-50
	125	120	18-19	4.0		
	155	140	19-20	4.6		
	190	160	20-21	5.2		
	225	180	21-22	6.4		
	260	200	22-23	7.0		
	300	220	24-25	7.4		
	335	240	26-27	7.8		
	370	260	28-29	8.5		
	415	280	29-30	9.4		
	455	300	30-31	10.5		

Table shown are approximate values that will vary depending on welding conditions (WESO, Cable length etc.).
For straight CO2 gas shielding, use two volts higher than shown.

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