



## Features and typical fields of application

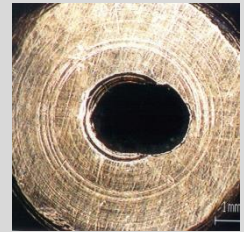
- MG-51T is a 70ksi class mild steel solid wire for Gas Metal Arc Welding process works with either straight CO<sub>2</sub> or Ar-CO<sub>2</sub> mixed gas.
- Its excellent wire feeding provides trouble-free welding for manual and automatic welding and ensures long life of contact tips and conduit liners.
- Kink-free packages will help 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



Familiarc™ MG-51T



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 <sub>2</sub>	0.10	0.64	1.26	0.011	0.012
	100% CO <sub>2</sub>	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 (ksi)	TS (ksi)	El (%)	CVN at -20°F (ft-lbs)
80%Ar-20%CO <sub>2</sub>	75	87	31	66
100% CO <sub>2</sub>	69	82	32	52

## Size & Packages

Wire Dia.	0.035", 0.045"	Package	44 lbs spool , 550 lbs drum
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Mild steel solid wire for GMAW process  
AWS A5.18 ER70S-6



**Recommended welding conditions and deposition rate with 75-80%Ar-bal.CO<sub>2</sub>**

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 CO<sub>2</sub> gas shielding, use two volts higher than shown.

**DISCLAIMER**

- Information in this material, such as chemical compositions and mechanical properties, is typical or an example for explaining the features and performances of our products, and it does not mean guarantee unless otherwise it is specified.
- Information contained herein is subject to change without notice. Please kindly contact Kobelco for latest information.



**WARNING:** This product can expose you to chemicals including Nickel and Titanium Dioxide, which are known to the State of California to cause cancer, and Chromium, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

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