



Rutile flux cored wire for mild steel welding for low temperature service down to -76F with 75-80%Ar-bal.CO₂ mixed gas
 AWS A5.29 E81T-Ni1MJ
 CWB A5.29M E551T1-Ni1MJ H8

Features and typical fields of application

- 80 ksi class rutile flux cored wire for all positional single pass and multiple passes welding with 75-80%Ar-bal.CO₂ shielding gas.
- Excellent impact toughness value down to -76F in the As-Welded condition and down to -40F after PWHT at mild condition (e.g. 1080F x 1 hour/inch thickness).
- DW-A81Ni1 is designed to have excellent weldability with a wide welding parameter range which makes this product very versatile for all position welding
- The optimized chemical design of the weld metal provides superior mechanical properties suitable for the most demanding industry specifications

Typical mechanical properties of weld metal per AWS A5.29 with 80%Ar-bal.CO₂

PWHT condition	0.2% PS (psi)	TS (psi)	EL (%)	CVN (ft-Lbs)	
				-76F°	-40F°
As Welded	75,000	84,400	29	105	113
1080°F x 2hours	71,100	83,300	30	94	103

Typical chemical composition of weld metal per AWS A5.29 with 80%Ar-bal.CO₂

C	Si	Mn	P	S	Ni
0.05	0.32	1.26	0.006	0.006	0.95

Typical Diffusible Hydrogen content per AWS A4.3 gas chromatography method

4.4 mL/100g at 280A-29V



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Recommended welding conditions and deposition rate

Wire Dia.	Wire Feed Speed (in./min)	Current (A)	Arc Voltage (V)	Deposition Rate (Lbs/hr)	Wire Stick-Out	Shielding Gas flow rate (CFH)
0.045"	140	120	21-24	4.0	5/8-3/4"	40-50
	200	160	23-26	6.0		
	290	200	25-28	8.0		
	330	220	25-28	9.0		
	400	250	26-28	10.5		
1/16"	100	180	22-25	4.5	3/4-1"	40-50
	165	240	23-26	7.0		
	190	260	24-27	8.0		
	250	300	27-29	10.0		
	300	340	28-30	11.5		

Table shown are approximate values that will vary depending on welding conditions (WESO, Cable length etc.).

Approvals

CWB, ABS

Available Products

Wire Dia.	0.045", 1/16"	Package	28Lbs spool
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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.

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