

## MIDALLOY Mastercor E81T1- Ni1C, Ni1M FLUX-CORED WIRE

### CLASSIFICATION

- AWS 5.29 Class E81T1-Ni1C, Ni1M / ASME SFA 5.29 Class E81T1-Ni1C, Ni1M
- UNS W1203X

### DESCRIPTION

- MIDALLOY Mastercor E81T1-Ni1 flux-cored wire is an “out of position”, 1% nickel flux-cored wire, particularly suited when strength and toughness are required.
- This wire can be used for single or multiple pass welding.
- Fast freezing slag allows excellent out of position welding
- Smooth bead profile

### APPLICATIONS

- For joining applications welding for attaching wear plates like HR-400 and HR-500 to carbon and alloy steel when low temperature impact resistance is required.
- For welding of common materials include ASTM A203, A532 Grades LC1 and LC2, A575, A734 as well as other steels containing 1% to 2.5% Nickel.
- These alloys are used extensively in the mining industry, offshore platform fabrication, structural bridge supports, earthmoving equipment and the power generation industry for low temperature toughness.

### TYPICAL CHEMISTRY (as deposited)

C	Mn	Si	P	S	Ni	GAS
.03	1.15	.44	.009	.008	.99	CO2
.03	1.29	.50	.009	.008	0.98	75%AR / 25%CO2

### TYPICAL MECHANICAL PROPERTIES

PER SHIELDING GAS	CO2 A.W.	75 AR / 25% CO2 A.W.	STRESS RELIEVED @ 1,150°F
TENSILE STRENGTH	83,000 PSI	90,000 PSI	86,000
YIELD STRENGTH	77,400 PSI	76,000 PSI	75,000
%ELONGATION IN 2"	24%	23%	25%
Impacts -40°F(-40°C)	60 ft-lbs	76 ft-lbs (103J)	69 ft-lbs
Impacts -60°F(-51°C)	40 ft-lbs	63 ft-lbs (85J)	44 ft-lbs

Note: Post weld heat treatment above 1,150°F (620°C) will reduce impact values.

### RECOMMENDED WELDING PARAMETERS

DIA.	FLAT		VERTICAL-UP		OVERHEAD	
	VOLTS	AMPS	VOLTS	AMPS	VOLTS	AMPS
1/16"	28-34	290-400	22-26	150-250	23-26	90-290
.045"	21-21	100-300	21-28	100-230	21-29	150-280

- Shielding Gas 100% CO<sub>2</sub>. 35-50 cfh

### STANDARD PACKAGING

- 33 lb. spool
- Available sizes .045", .052" and 1/16"

12/30/09

*The contents of this publication are presented for informational purposes only, and while every effort has been made to ensure their accuracy, they are not to be construed as warranties or guarantees, express or implied, regarding the products or services described herein or their use or applicability. We reserve the right to modify or improve the designs or specifications of such products at any time without notice.*

Office and Corporate Warehouse  
 630 Axminister Drive  
 St. Louis, MO 63026 • 636-349-6000 • 800-776-3300  
 Fax 636-349-2240

