

Supercored 81MAG

AWS A5.29 / ASME SFA5.29 E81T1-Ni1M H4
EN ISO 17632-A-T 46 6 1 Ni P M 2 H5

TYPE : Rutile

Applications

Supercored 81MAG can be used in oil and gas construction, pipe, and offshore structures.

Characteristics on Usage

Supercored 81MAG is a titania type flux cored wire to be used with Ar+CO₂ gas mixture shielding. This provides excellent notch toughness at low temperature, not only as-welded but also stress relieved state.

Notes on Usage

- ① Proper preheating (50~150° C)(122~302°F) and interpass temperature must be used in order to release hydrogen which may cause cracking in weld metal when electrodes are used for medium and heavy plates.
- ② One-side welding defects such as hot cracking may occur with wrong welding parameter such as high welding speed.
- ③ Use Ar+20~25% CO₂ gas.

Welding Position



1G 2F 3G 4G
(PA) (PB) (PF) (PE)

Current

DC +

Shielding Gas

Ar+20~25%CO₂

Typical Chemical Composition of All-Weld Metal (%)

C	Si	Mn	P	S	Ni
0.05	0.28	1.20	0.008	0.012	0.93

Typical Mechanical Properties of All-Weld Metal

YS MPa(lbs/in ²)	TS MPa(lbs/in ²)	EL (%)	Temp. °C (°F)	CVN-Impact Value J (ft · lbs)
550 (79,900)	590 (85,700)	26	-60 (-76)	60 (44) As welded
510 (74,100)	570 (82,800)	28	-40 (-40)	98 (73) PWHT(620° C × 2hr)

Approval

ABS, BV, DNV, LR, CWB,
RINA, MRS, TÜV, DB, CE

I Packing

Dia. (mm) 1.2 1.6
(in) .045 1/6

Spool(kg) 12.5 15 20
(lbs) 28 33 44

Sizes Available and Recommended Currents (Amp.)

Size mm(in)	1.2 (.045)	1.6 (1/16)
F & HF	200~290	260~350
V-up,OH	180~250	230~290
V-down	210~280	270~330