

# ROYALFIL GS 81RA1 (BW) (E81T1-A1C)

AWS A / SFA 5.29 E81T1-A1C EN ISO 17634 A T(Mo)RC1H5

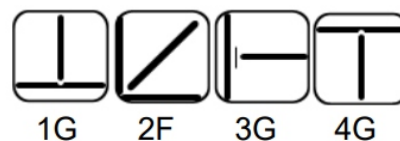
## Applications

Royalfil GS 81RA1(BW) is used for welding of similar composition of C-Mo steels. Commonly used in the fabrication and the erection of boilers, pressure vessels, pressure piping & tubing. Typical applications include the welding of CMo steels such as ASTM A161, A204, A302 Gr.A & A335-P1 pipe, A336 Gr. F1, A352 Gr. LC1, A356 Gr. 2, A533

## Characteristics on Usage

Royalfil GS 81RA1(BW) is an all position low alloy rutile base flux cored wire depositing approximately 0.50%Mo weld metal with CO<sub>2</sub> shielding. The slag coverage is complete and designed for easy removal. Weld metal is consistently free of inclusions and porosity for radiography soundness. Addition of Molybdenum increases strength of the weld metal especially at elevated temperatures. Also increases corrosion / crack resistance.

## Welding Positions



## Recommended Stick Out

15-20mm

## OutShielding Gas

Carbon Dioxide (CO<sub>2</sub>) shielding  
Gas Flow: 15-20 Lit/Min.

## Chemical Composition Of Weld Metal

C%	Mn%	Si%	S%	P%	Mo%
0.12 Max	1.25 Max	0.80 Max	0.030 Max	0.030 Max	0.40-0.65

## Mechanical Properties Of Weld Metal

U.T.S. (N/mm <sup>2</sup> )	Y.S. (N/mm <sup>2</sup> )	ELONGATION ( L = 4d ) %
550-690	470-545 Min	19-24.50 Min

## Welding Parameters (DC + VE)

Diameter (mm)	Flat & Horizontal (A)	Flat & Horizontal (V)	Vertical - Up (V)	Vertical - Up (V)	Overhead (V)	Overhead (V)
1.20	180-250	26-30	120-210	22-26	150-200	26-30
1.60	210-280	26-30	160-250	22-27	190-240	26-30

## Packing

15 kgs. Vacuum packed plastic spool