

**ROYALFIL GS 16 R (E81T1-Ni1 C)**

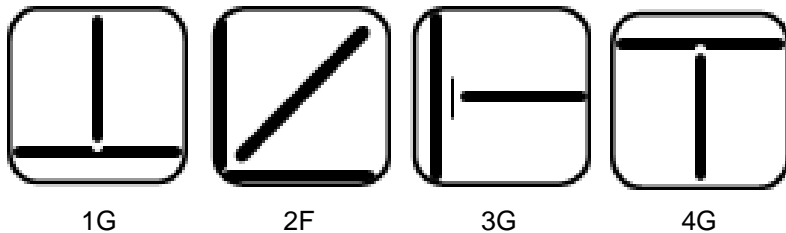
AWS A / SFA 5.29 E81T1-Ni1 C

**Applications**

Royalfil-GS-16R fcw wire have been designed to produce weld metal with increase strength (without being air hardenable) & with increase notch toughness at low temperature. This Nickel steel weld metal can be used without PWHT. Often used in structural applications where excellent toughness is required. For e.g. Construction machineries, Structural bridges & storage tanks. Ideal for welding quenched & tempered steels of HY 80 type.

**Characteristics on Usage**

Royalfil GS-16 R is Rutile base gas shielded flux cored wire welding for all position welding with Co<sub>2</sub> shielding gas depositing radiographic quality metal. Arc is smooth & stable with low spatter and good bead appearance. Slag coverage is complete and easy removal.

**Welding Positions****Chemical Composition Of Weld Metal**

Element	C%	Mn%	Si%	S%	P%	Ni %	Mo
Typical Values	0.045	1.40	0.55	0.007	0.017	1.00	0.2
Spec. Reqd.	0.12 Max	1.50 Max	0.80 Max	0.030 Max	0.030 Max	0.80 -1.10	0.35

**Mechanical Properties Of Weld Metal**

Property	U.T.S. (N/mm <sup>2</sup> )	Y.S. (N/mm <sup>2</sup> )	ELONGATION ( L = 4d ) %	IMPACT ( CVN ) AT - 30° C ( J )
Typical Values	620	520	24	80
Spec. Reqd.	550-690	470 Min	19 Min	27 Min

**Welding Parameters (DC + VE)**

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

**Packing**

15 kgs. Vacuum packed plastic spool.