

**ROYALFIL GS 18 R (E81T1-W2 C)**

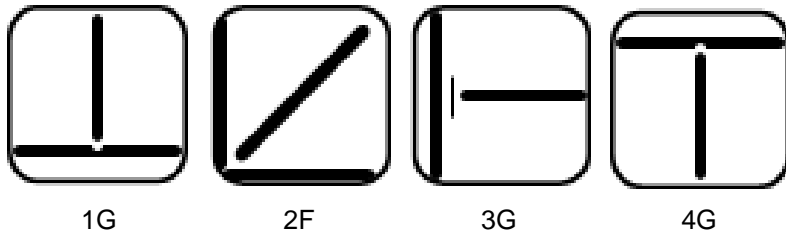
AWS A / SFA 5.29 E81T1-W2 C

**Applications**

Royalfil-18R is designed for welding atmospheric corrosion resistant steel as Resco, corton & ITACOR. Suitable for joining weathering grade steels conforming to ASTM SA-588, SA-242 etc.

**Characteristics on Usage**

Royalfil GS-18R is Rutile base all position flux cored wire for welding of low alloy. This wire is having stable and smooth arc with good slag detachability & excellent bead appearance with CO<sub>2</sub> shield. This wire is designed for welding CORTON grade weather resistance steels.

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

| Element        | C%       | Mn%        | Si%        | S%       | P%       | Cr %       | Ni %  |
|----------------|----------|------------|------------|----------|----------|------------|-------|
| Typical Values | 0.05     | 0.97       | 0.45       | 0.01     | 0.018    | 0.62       | 0.6   |
| Spec. Reqd.    | 0.12 Max | 0.50 -1.30 | 0.35 -0.80 | 0.03 Max | 0.03 Max | 0.45- 0.70 | 0.40- |

**Mechanical Properties Of Weld Metal**

| Property       | U.T.S.<br>(N/mm <sup>2</sup> ) | Y.S.<br>(N/mm <sup>2</sup> ) | ELONGATION<br>( L = 4d ) % | IMPACT ( CVN )<br>AT - 30° C ( J ) |
|----------------|--------------------------------|------------------------------|----------------------------|------------------------------------|
| Typical Values | 600                            | 510                          | 25                         | 50                                 |
| Spec. Reqd.    | 550-690                        | 470 Min                      | 19 Min                     | 27 Min                             |

**Welding Parameters (DC + VE)**

| Diameter<br>(mm) | Flat &<br>Horizontal<br>(A) | Flat &<br>Horizontal<br>(V) | Vertical - Up<br>(A) | Vertical - Up<br>(V) | Overhead<br>(A) | Overhead<br>(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           |

**Approvals**

RDSO-IRS CLASS IV

**Packing**

15 kgs. Vacuum packed plastic spool.