

# EC GRADE

## ALUMINIUM RODS

Environmentally-friendly processes are employed throughout the mill. The liquid aluminium is supplied directly from EGA smelters in KIZAD in Abu Dhabi. By applying industry best practices and advanced production systems, the produced EC rods are 99.7% pure, and the production complies with stringent requirement of ASTM B233-97.

### ALUMINIUM EC RODS CHEMICAL PROPERTIES:

| Element %                   | DAC Specification |        | ASTM B233-97 |      |
|-----------------------------|-------------------|--------|--------------|------|
|                             | Min               | Max    | Min          | MAx  |
| Aluminum (Al)               | 99.7              |        | 99.5         |      |
| Silicon(Si)                 |                   | 0.10   |              | 0.10 |
| Iron(Fe)                    |                   | 0.20   |              | 0.40 |
| Zinc(Zn)                    |                   | 0.02   |              | 0.05 |
| Gallium(Ga)                 |                   | 0.02   |              | 0.03 |
| Vanadium(V) + Titanium (Ti) |                   | 0.02   |              | 0.02 |
| Copper (Cu)                 |                   | 0.05   |              | 0.05 |
| Manganese (Mn)              |                   | 0.01   |              | 0.01 |
| Chromium (Cr)               |                   | 0.01   |              | 0.01 |
| Boron (B)                   |                   | 0.05   |              | 0.05 |
| Arsenic (As)                |                   | 0.009  |              | --   |
| Heavy elements ( Cd+Hg+Pb)  |                   | 0.0095 |              | --   |
| Other elements each (OE)    |                   | 0.03   |              | 0.03 |
| Other elements total        |                   | 0.10   |              | 0.10 |

### Applications:

*The Aluminium rods are used for:*

- Cables
- Overhead conductors
- AAC
- ACSR
- AAAC
- ACSR/AW
- Wires



### MECHANICAL PROPERTIES:

| Temper        | Tensile Limits (MPa.) | Elongation % min (250mm Gauge Length) |
|---------------|-----------------------|---------------------------------------|
| 1350/1370-O   | 59-97                 | 25                                    |
| 1350/1370-H12 | 83-117                | 20                                    |
| 1350/1370-H14 | 103 - 138             | 15                                    |
| 1350/1370-H16 | 117- 152              | 6                                     |

### ELECTRICAL PROPERTIES:

| Temper        | Resistivity $\Omega\text{mm}^2/\text{m}$ , max | Equivalent Volume of Conductivity %IACS (min) |
|---------------|--|---|
| 1350/1370-O   | 0.027899                                       | 61.8  |
| 1350/1370-H12 | 0.028035                                       | 61.5  |
| 1350/1370-H14 | 0.028080                                       | 61.4  |
| 1350/1370-H16 | 0.028126                                       | 61.3  |

