

## PRODUCT SPECIFICATION

### ALUMINIUM ALLOY RODS GRADE 8176

#### 1.0 SCOPE:

This specification is main to Aluminium Alloy Rods Grade 8176 produced by Press Metal Aluminium Rods Sdn Bhd.

#### 2.0 REFERENCED SPECIFICATIONS:

ASTM B 800                      Standard Specification for 8000 Series Aluminium Wire for Electrical Purposes -  
 Annealed and Intermediate Tempers<sup>1</sup>

#### 3.0 TECHNICAL SPECIFICATION:

##### 3.1 DIAMETER

Specified diameter (mm)	Deviation of mean diameter from specified diameter (mm)	Deviation at any point from specified diameter (mm)
9.52	± 0.51	± 0.76

##### 3.2 TENSILE & ELONGATION

Description (Temper)	Tensile Strength kgf/mm <sup>2</sup>	Tensile Strength Mpa	Elongation % at 250mm GL (Min)
8176 - H14	10.5 ~ 15.5	103 ~ 152	10.0
8176 - O	6.0 ~ 11.3	59 ~ 111	25.0

##### 3.3 CONDUCTIVITY & RESISTIVITY

Description (Temper)	Minimum Conductivity % IACS, Min	Volume electrical resistivity at 20°C ohm.mm <sup>2</sup> /m, Max
8176 - H14	60.0	0.028735
8176 - O	62.0	0.027808

##### 3.4 CHARACTERISTIC

Description	Unit	
Specific gravity	kg/m <sup>3</sup>	2710
Temperature coefficient at 20 °C	per °C	0.00400

### 3.5 CHEMICAL COMPOSITION

Element	Composition (%)
Silicon	0.03 ~ 0.15
Iron	0.40 ~ 1.00
Zinc	Max: 0.10
Gallium	Max: 0.03
Other elements, each	Max: 0.05
Other elements, total	Max: 0.15
Aluminium	Remainder

### 4.0 FINISHING & APPEARANCE

The Aluminum Rod is supplied in the form of a continuous coil without any joints. The Rod shall be clean, without any excessive oil & grease, of uniform lustre, smooth and free from flakes, cracks, kinks, dents, twists, and other injury or defects.

### 5.0 PACKAGING

The coil shall be supplied with following dimension:

Inner diameter	Approximately 500mm
Outer diameter	1500mm maximum
Height	850mm to 950mm

The nominal weight for each coil approximately  $2000 \pm 200$ kg.

Each coil shall be securely strapped to a timber pallet. The pallet shall be dry or free from moisture to prevent insect or fungal attack.

Adequate protection shall be provided to prevent corrosion or physical damage to the coil.

Each coil shall be wrapped with a blank polyethylene in order to be protected from damage and prevent contamination to the rods surface which might cause from the environment.

### 6.0 MARKING

Each coil shall be attached with waterproof label on the outside of the coil with following information:

- 1) Customer name
- 2) Material type and grade
- 3) Nominal finished rod diameter
- 4) Tested mechanical properties ( Tensile and Elongation)
- 5) Conductivity
- 6) Net and gross weight
- 7) Coil identification number
- 8) Manufacturing date

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Page : 3 of 3

## 7.0 TEST CERTIFICATES

Test certificate shall be provided to customer upon or precede delivery. The contents inside the Test Certificate shall be as follows:

- 1) Customer's name
- 2) Material type and grade
- 3) Delivery Order number
- 4) Net weight
- 5) Testing result for Clause 3.0

\*Requisition for additional information inside the Test Certificate shall be considered.

## 8.0 QUALITY ASSURANCE

All products are manufactured to meet the standard specification that been agreed between Press Metal Aluminium Rods Sdn Bhd and customer. Each of our product been tested with reliable testing equipment. Manufacturing of this product has considered the restriction of hazardous element usage stated in REACH and ROSH directive.