



# Adinath

Create, Enhance & Sustain

## C-6783:HIGH TENSILE BRASS

### Specification Sheet

#### DESCRIPTION

Manganese Bronze comes from a family of High strength copper based alloys which includes Manganese as an alloying agent with additions of Iron, Aluminium, Zinc, Lead and sometimes Nickel or Silicon. It has exceptionally high strength as compared to normal brass and therefore commonly known as High Tensile Brass, High Tensile Manganese Bronze, High Strength Brass or Manganese Aluminium Bronze.

|   |  |  |
|---|--|--|
| <b>Cu</b><br>Copper<br>63.546<br>2-8:18-1 | <b>Al</b><br>Aluminium<br>26.982<br>2-8:3    | <b>Mn</b><br>Manganese<br>54.938<br>2-8:18-2 |
| <b>Fe</b><br>Iron<br>55.845<br>2-8:14-2   | <b>Pb</b><br>Lead<br>207.2<br>2-8:18:30-18:4 | <b>Zn</b><br>Zinc<br>65.38<br>2-8:18-2       |

#### CHEMICAL COMPOSITION

| Element | Cu    | Al   | Fe   | Mn   | Zn      | Pb   |
|---------|-------|------|------|------|---------|------|
| Min (%) | 55.00 | 0.20 | 0.20 | 1.00 | Balance | -    |
| Max (%) | 59.00 | 2.00 | 1.50 | 3.00 |         | 0.50 |

Note: Ni includes Co; Cu+ named elements >= 99.5%; Unless otherwise noted, single values represent maximums.

#### SHAPE



**SOLID ROUND BARS**  
Size Range :  
Dia 10 mm up to 120 mm.



**SOLID HEX BARS**  
Size Range :  
A/F 10 mm up to 100 mm.



**SOLID SQUARE BARS**  
Size Range :  
A/F 10 mm up to 90 mm.



**SOLID RECTANGLE BARS**  
Size Range :  
A/F 10 x 12 mm up to 100 x 50 mm.



**HOLLOW BARS**  
**Outer Diameter :** In Round, Hex & Square.  
**Size Range :** 30 mm up to 120 mm.  
**Inner Diameter :** Round  
**Size Range :** 20 mm up to 80 mm.



**PROFILES & SECTIONS**  
As per Customers' Drawing



**BAR LENGTH**  
Length : Up to 4 Meters.  
Delivery Condition : As Extruded or Cold Drawn.

**STRAIGHT KNURLING**



**CROSS KNURLING**



Straight Knurling & Cross Knurling will be available upon shape & size Feasibility of Brass Rod

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## MECHANICAL PROPERTIES

| Round (Dia)       |                   |               |              |                    |                |
|-------------------|-------------------|---------------|--------------|--------------------|----------------|
| Range (mm)        |                   | UTS Min (MPA) | PS Min (MPA) | Elongation Min (%) | Hardness (HRB) |
| 4 to 50 Inclusive |                   | 540           | -            | 12                 | -              |
| HEX (A/F)         |                   |               |              |                    |                |
| Range (mm)        |                   | UTS Min (MPA) | PS Min (MPA) | Elongation Min (%) | Hardness (HRB) |
| 4 to 50 Inclusive |                   | 540           | -            | 12                 | -              |
| Square (A/F)      |                   |               |              |                    |                |
| Range (mm)        |                   | UTS Min (MPA) | PS Min (MPA) | Elongation Min (%) | Hardness (HRB) |
| 4 to 50 Inclusive |                   | 540           | -            | 12                 | -              |
| Rectangle         |                   |               |              |                    |                |
| Range (mm)        |                   | UTS Min (MPA) | PS Min (MPA) | Elongation Min (%) | Hardness (HRB) |
| Thickness         | 4 to 50 Inclusive | 540           | -            | 12                 | -              |

## PACKING



-  PVC Pipe Packing for Small Diameter Rods.
-  Hessian Cloth Packing.
-  Wooden Box Packing as per Customer requirements.

## FABRICATION PROPERTIES

| Soldering | Brazing | Machinability Rating |
|-----------|---------|----------------------|
| Excellent | Fair    | 30                   |

## TYPICAL USES

| Product Category  | Product                        |
|-------------------|--------------------------------|
| Offshore & Marine | Marine Hardware and Fasteners. |

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| Product Category | Product  |
|------------------|--|
| Others           | Gas Valves and Fittings, Fasteners, Pump Trim, Gears, Locks, Heavy-Duty Electrical Connectors, Transmission Components, Safety Tools and Decorative Metalwork. |

## VALUE ADDED SERVICES

AEPL manufactures and supplies Copper Alloys Extruded Bars to Domestic as well as International Markets. Our customer base has a key advantage since our Foundries, Laboratories, Extrusion Mill, Shell Mouldings and CNC Machine shop are all located on a single site, which eliminates waste and allows excellent quality control at each stage. Our ability to reclaim swarf and machined chips allows us to offer competitive pricing for the parts that we either extrude or cast.

### Casting Range



 25 Grams to 10 Kgs

### Forging Sizes



 50 Grams to 6 Kgs

### Machining Sizes



 1 mm to 200 mm

### CONNECT WITH US Adinath Extrusion Pvt. Ltd.

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