

C6783

MANGANESE BRONZE

DESCRIPTION

High Tensile Brass are alloys of Copper and Zinc. C6783 is a duplex or alpha/beta alloy. Brass alloy C6783 is a versatile high strength, hot workable, machinable engineering alloy sometimes referred to as a Manganese Bronze or High Tensile Brass.

CHEMICAL COMPOSITION

| Elements | Min (%) | Max (%) |
|--------------|---------|---------|
| Cu | 55.00 | 59.00 |
| Pb | - | 0.50 |
| Fe | 0.20 | 1.50 |
| Al | 0.20 | 2.00 |
| Mn | 1.00 | 3.00 |
| Total Others | - | - |
| Remainder | | |

Mechanical Properties (As Per Temper BD)

| Range (MM) | From | To | UTS Min (Mpa) | PS Min (Mpa) | Elongation Min (%) | Hardness Min | Hardness Max |
|-----------------------|------|----|---------------|--------------|--------------------|--------------|--------------|
| Round (Dia) | 6 | 50 | 540 | - | 12 | - | - |
| Hex (A/F) | 6 | 50 | 540 | - | 12 | - | - |
| Square (A/F) | 6 | 50 | 540 | - | 12 | - | - |
| Rectangle (Thickness) | 6 | 50 | 540 | - | 12 | - | - |

PHYSICAL PROPERTIES

| | |
|------------------|------|
| Specific Gravity | 8.63 |
|------------------|------|

FABRICATION PROPERTIES

| Technique | Suitability |
|--------------------------------|-------------|
| Capacity for being Cold formed | Poor |
| Capacity for being Hot worked | Good |
| Machinability Ration | 30% |
| Resistance to Corrosion | Excellent |
| Suitability for soldering | Excellent |

TYPICAL USES

- Marine hardware
- Valve seats
- Synchronizer ring
- Propeller shaft
- Pump shaft
- Fasteners
- Lead screw nuts