

DESCRIPTION

IS 6912 FNB is commonly referred to as a Naval Brass and issued typically in a wide range of marine and subsea applications. This brass alloy offers superior strength, corrosion resistance and offers good property retention at cryogenic temperatures with excellent hot formability and very good corrosion resistance.

CHEMICAL COMPOSITION

| Elements | Min (%) | Max (%) |
|--------------|-----------|---------|
| Cu | 61.00 | 64.00 |
| Pb | - | 0.20 |
| Sn | 1.00 | 1.50 |
| Fe | - | 0.10 |
| Total Others | - | 0.50 |
| Zn | Remainder | |

MECHANICAL PROPERTIES (AS PER TEMPER HB)

| Range (Inch) | From | To | UTS Min (MPa) | PS Min (Mpa) | Elongation Min (%) | Hardness Min | Hardness Max |
|-----------------------|------|-------|---------------|--------------|--------------------|--------------|--------------|
| Round (Dia) | 1.5 | 75.00 | 340.00 | - | 15.00 | - | - |
| Hex (A/F) | 3.00 | 70.00 | 340.00 | - | 15.00 | - | - |
| Square (A/F) | 3.00 | 60.00 | 340.00 | - | 15.00 | - | - |
| Rectangle (Thickness) | 3.00 | 50.00 | 340.00 | - | 15.00 | - | - |

PHYSICAL PROPERTIES

| | |
|-----------------------------------------------------------------------------|-------|
| Melting Point - Liquidus°F | 1650 |
| Melting Point - Solidus°F | 1630 |
| Densitylb/cu in. at 68°F | 0.304 |
| Specific Gravity | 8.41 |
| Electrical Conductivity% IACS at 68°F | 26 |
| Thermal ConductivityBtu/ sq ft/ ft hr/ °F at 68°F | 67 |
| Coefficient of Thermal Expansion 68-57210- ⁶ per °F (68 – 572°F) | 11.8 |
| Specific Heat CapacityBtu/ lb /°F at 68°F | 0.09 |
| Modulus of Elasticity in Tensionksi | 15000 |
| Modulus of Rigidityksi | 5600 |

FABRICATION PROPERTIES

| Technique | Suitability |
|--------------------------------|-------------|
| Capacity for being Cold Worked | Fair |
| Hot Worked | Excellent |
| Machinability Rating | 30% |
| Forgeability Rating | 90% |
| Silver Alloy Brazing | Excellent |
| Soft Soldering | Excellent |
| Oxyacetylene Welding | Good |

TYPICAL USES

- Fasteners
- Industrial
- Marine