

## Eagle Brass 770 Nickel Silver 18%, 1/2 Hard

Category : Metal , Nonferrous Metal , Nickel Alloy

**Material Notes:**

770 has good cold forming properties, is tarnish resistant and has very good spring properties. 770 does not become subject to embrittlement at lower temperature and it has excellent corrosion resistance. Typical uses include springs, resistance wire and optical goods. Information provided by Eagle Brass Company

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Eagle-Brass-770-Nickel-Silver-18-12-Hard.php](http://www.lookpolymers.com/polymer_Eagle-Brass-770-Nickel-Silver-18-12-Hard.php)

| Physical Properties | Metric    | English                  | Comments |
|---------------------|-----------|--------------------------|----------|
| Density             | 8.69 g/cc | 0.314 lb/in <sup>3</sup> | Annealed |

| Mechanical Properties      | Metric        | English           | Comments               |
|----------------------------|---------------|-------------------|------------------------|
| Hardness, Rockwell 30T     | 71 - 78       | 71 - 78           | Thickness > 0.020 Inch |
| Tensile Strength, Ultimate | 538 - 655 MPa | 78000 - 95000 psi |                        |
| Tensile Strength, Yield    | 441 - 641 MPa | 64000 - 93000 psi | 0.2% offset            |
| Elongation at Break        | 5.0 - 24 %    | 5.0 - 24 %        | in 2 in.               |
| Tensile Modulus            | 124 GPa       | 18000 ksi         |                        |

| Thermal Properties   | Metric                                    | English                                     | Comments |
|----------------------|---|---|----------|
| CTE, linear          | 16.7 $\mu\text{m}/\text{m}\cdot\text{°C}$ | 9.30 $\mu\text{in}/\text{in}\cdot\text{°F}$ |          |
|                      | @Temperature 20.0 - 300 °C                | @Temperature 68.0 - 572 °F                  |          |
| Thermal Conductivity | 29.4 W/m-K                                | 204 BTU-in/hr-ft <sup>2</sup> -°F           |          |

| Component Elements Properties | Metric | English | Comments |
|-------------------------------|--------|---------|----------|
| Copper, Cu                    | 55 %   | 55 %    |          |
| Nickel, Ni                    | 18 %   | 18 %    |          |
| Zinc, Zn                      | 27 %   | 27 %    |          |

| Electrical Properties  | Metric           | English          | Comments |
|------------------------|------------------|------------------|----------|
| Electrical Resistivity | 0.0000324 ohm-cm | 0.0000324 ohm-cm | Annealed |

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