

## Eagle Brass 151 ZHC® COPPER, Hard

Category : Metal , Nonferrous Metal , Copper Alloy

### Material Notes:

Alloy C151 has excellent solderability, high conductivity, and good strength. C151 has superior high temperature softening resistance compared to pure copper C110. Applications can be found in high current interconnects, pin grids, welding wire, or other elevated temperature applications. Information provided by Eagle Brass Company

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Eagle-Brass-151-ZHC-COPPER-Hard.php](http://www.lookpolymers.com/polymer_Eagle-Brass-151-ZHC-COPPER-Hard.php)

| Physical Properties | Metric    | English                  | Comments |
|---------------------|-----------|--------------------------|----------|
| Density             | 8.94 g/cc | 0.323 lb/in <sup>3</sup> | Annealed |

| Mechanical Properties      | Metric        | English           | Comments               |
|----------------------------|---------------|-------------------|------------------------|
| Hardness, Rockwell 30T     | 59 - 64       | 59 - 64           | Thickness > 0.020 Inch |
| Tensile Strength, Ultimate | 365 - 427 MPa | 53000 - 62000 psi |                        |
| Tensile Strength, Yield    | 352 - 407 MPa | 51000 - 59000 psi | 0.2% offset            |
| Elongation at Break        | 2.0 - 6.0 %   | 2.0 - 6.0 %       | in 2 in.               |
| Tensile Modulus            | 117 GPa       | 17000 ksi         |                        |

| Thermal Properties   | Metric                     | English                            | Comments |
|----------------------|----------------------------|------------------------------------|----------|
| CTE, linear          | 17.6 µm/m-°C               | 9.80 µin/in-°F                     |          |
|                      | @Temperature 20.0 - 300 °C | @Temperature 68.0 - 572 °F         |          |
| Thermal Conductivity | 359.7 W/m-K                | 2496 BTU-in/hr-ft <sup>2</sup> -°F |          |

| Component Elements Properties | Metric | English | Comments |
|-------------------------------|--------|---------|----------|
| Copper, Cu                    | 99.9 % | 99.9 %  |          |
| Zirconium, Zr                 | 0.10 % | 0.10 %  |          |

| Electrical Properties  | Metric            | English           | Comments |
|------------------------|-------------------|-------------------|----------|
| Electrical Resistivity | 0.00000187 ohm-cm | 0.00000187 ohm-cm | Annealed |

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