

VBC Alloy 4778

MBF 30/Nicrobraz 130/Amdry 780/Nibsi-4

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| Designation | AMS 4778 | Issued: April/14 | MSRR: 9500/114 | AMS: 4778K |
| | | Revision: 01 | | |
| Cross Reference/ Conformance Specifications | AMS 4778K BS EN 1044 Ni103 AWS A5.8 BNi-3 MSRR 9500/114 General Electric B50TF205 | UNS Number N99630 ISO 3677 B-Ni92SiB-980/1040 JIS BNi-3 Omat 3/118 - 3/118B - 3/118C BS EN ISO 17672:2010 Ni 630 | | |
| Description | Nickel based brazing alloy using Boron and Silicon as melting point depressants. This low temperature braze alloy has excellent ductility and high strength as well as good corrosion resistance properties. | | | |
| Temperatures | Solidus: 984°C | Liquidus: 1038°C | Brazing Range: 1010 - 1175°C Recommended: 1040 °C | |
| Materials To Be Brazed, Applications and Advice | <p>Steels, Stainless Steel, Nickel based Superalloys.</p> <p>High stress joints in aerospace and industrial applications, where oxidation and corrosion resistance considerations are important.</p> <p>Auto heat exchangers, turbine components, honeycomb.</p> <p>Viscosity: good flow – suitable for deep, narrow joints.</p> <p>Recommended Atmosphere: Vacuum (or Argon or dry pure Hydrogen)</p> <p>Recommended Gap size: 0.0005" – 0.004" / 0.012mm – 0.1mm</p> <p>Less sensitive to poor atmospheres than BNi-1 or BNi-2</p> | | | |
| Chemical Composition WT% | Carbon – 0.06% max | Titanium – 0.05% max | | |
| | Silicon – 4.0-5.0% | Aluminium – 0.05% max | | |
| | Phosphorous – 0.02% max | Iron – 0.50% max | | |
| | Sulphur – 0.02% max | Zirconium – 0.05% max | | |
| | Boron – 2.75-3.50% | Selenium – 0.005% max | | |
| | Cobalt – 0.10% max | Nickel - Balance | | |
| Physical Properties | Density 8.13 g/cm³ (Mg/m³) | | | |
| Forms of Supply | Foil Wire Powder Paste Preforms | | | |

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