



# AEROSPACE MATERIAL SPECIFICATION

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## AMS 4782

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### BRAZING, FILLER METAL Nickel Base - 19Cr-10Si

1. ACKNOWLEDGMENT: A vendor shall mention this specification number in all quotations and when acknowledging purchase orders.
2. FORM: Powder, wire, strip, rod, or as ordered.
3. APPLICATION: Primarily for joining corrosion and heat resistant alloys where corrosion and oxidation resistant joints with good strength at elevated temperatures are required. Flows well in dry reducing or neutral atmospheres and in vacuum.
4. COMPOSITION:

|                        | min       | max   |
|------------------------|-----------|-------|
| Carbon                 | --        | 0.10  |
| Chromium               | 18.0      | 20.0  |
| Silicon                | 9.75      | 10.50 |
| Cobalt (if determined) | --        | 1.0   |
| Iron                   | --        | 1.0   |
| Boron                  | --        | 0.10  |
| Other Elements, total  | --        | 0.50  |
| Nickel                 | remainder |       |

- 4.1 In wire and strip, these requirements apply after removal of the plastic bonding material.

Note. The following approximate values are listed for reference:

|          |                 |
|----------|-----------------|
| Solidus  | 1975 F (1079 C) |
| Liquidus | 2075 F (1135 C) |

5. CONDITION: Unless otherwise ordered, the product shall be furnished in the following condition:

- 5.1 Powder: As fabricated.
- 5.2 Wire and Strip: Powder bonded in a suitable thermoplastic material.
- 5.3 Rod: As cast, with fins and projections removed.

6. TECHNICAL REQUIREMENTS:

- 6.1 Burn-Off of Plastic: The plastic used for bonding powder to form wire and strip shall burn off, leaving no undesirable residue, when material is heated to not higher than 1800 F (982 C).
- 6.2 Tensile Strength of Wire or Strip: Shall be not lower than 360 psi.
- 6.3 Metallic Content of Wire or Strip: The ratio of volume of alloy to volume of plastic binder shall be the largest possible consistent with the technical requirements.