

File: 1.9.2.2P-1278F
Issue: K10313
Supersedes: I10510

POWDER CHARACTERISTICS **TAFE 1278F SUPER ALLOY 718**

Summary:

TAFE 1278F powder is made exclusively for thermal spraying. Thermal sprayed Super Alloy 718 coatings are being increasingly utilized in aircraft engines for wear and corrosion protection at elevated temperatures. Industrial applications, such as pump and furnace components are also increasing. The ability to provide thick coatings, over 0.25 inches (6.5 mm), is important for many of these applications. Spraying with TAFE 1278F results in coatings that are dense, well bonded and easily machined. In fact, these coatings exhibit a quality which is similar to wrought Inconel™ 718 material. TAFE 1278F coatings resist oxidation to 1600 °F (870 °C).

CAUTION: All TAFE powders are produced to exacting specifications and have been optimized for use in the JP-5000 HP/HVOF and PlazJet plasma spray processes. Use of other powders may not produce the properties listed in this Technical Data Bulletin.

Applications:

- The aircraft power plant industry is increasingly designing parts used in the newer engines utilizing Inconel 718. As a result, a need for Super Alloy 718 coatings up to 0.140" (3.5 mm) thick for overhaul of these parts is driving the use of the HVOF process and Super Alloy 718. TAFE's low internal stress coating is an ideal application for this market.
- Repair and restoration of Inconel 718 gas turbine engine components
- Repair of pump bodies
- Repair of rocket and jet engine components
- Extrusion die repair
- Corrosion protection
- Oxidation resistance up to 1600 °F (870 °C)

Aircraft Specifications:

Conforms to: GE B50TF202

Consult your TAFE coatings application engineer for help in solving your specific coating requirements.

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Composition:

	<u>% Weight</u>
Nickel	53
Chromium	19
Iron	19
Niobium	5
Molybdenum	3

Particle Size

-270/D

Hazards:

Observe normal spraying practices. Respiratory and hearing protection is advised. For general guidelines see AWS Publication C2.1-73, and AWS TSS-85. Thermal spraying is a safe process when performed in accordance with proper safety measures.

For further information on HVOF coatings, equipment and supplies, as well as other thermal spray processes and custom automated systems, contact:

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