

File: 1.9.2.2P-1277F
Issue: N10903
Supersedes: M10723

POWDER CHARACTERISTICS

TAFE 1277F Nickel - Chromium - Aluminum - Molybdenum Alloy

Summary:

TAFE 1277F powder is made exclusively for thermal spraying. Thermal sprayed Alloy 713C coatings are being utilized in aircraft engine vane repair 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 0.20 inches (5.1 mm), is important for many of these applications. Spraying with TAFE 1277F results in coatings that are dense, well bonded and easily machined. In fact, these coatings exhibit a quality which is similar to cast Alloy 713C material. TAFE 1277F coatings resist oxidation to 1500°F (816°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 has been designing parts used in the newer engines utilizing Alloy 713C. As a result, a need for a sprayed Alloy 713C coatings for overhaul of these parts is driving the use of the HVOF process and Alloy 713C. TAFE's low internal stress coating with virtually no oxides or porosity is an ideal application for this market.
- Repair and restoration of Alloy 713C gas turbine engine components
- Repair of pump bodies
- Repair of rocket and jet engine components
- Extrusion die repair
- Corrosion protection
- Oxidation resistance up to 1500°F (816°C)

Aircraft Specifications:

Conforms to: GE B50TF202 CI D
PWA 655

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

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Composition:

	<u>% Weight</u>
Nickel	Balance
Chromium	14
Aluminum	6
Molybdenum	4
Nb + Ta	2
Titanium	1

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:

Tafa Incorporated
146 Pembroke Road, Concord, NH 03301
Phone (603) 224-9585
Fax (603) 225-4342