

1234F

 File: 1.9.2.2P-1234F
 Issue: N11216
 Original Issue

Powder Characteristics

TAFE 1234F 420 Stainless Steel

Draft

24 May 1999

Nominal Composition:

| | % Weight |
|-----------|----------|
| Chromium | 13 |
| Nickel | 1.0 |
| Manganese | 1.0 |
| Iron | Balance |

Powder Type:

Gas Atomized

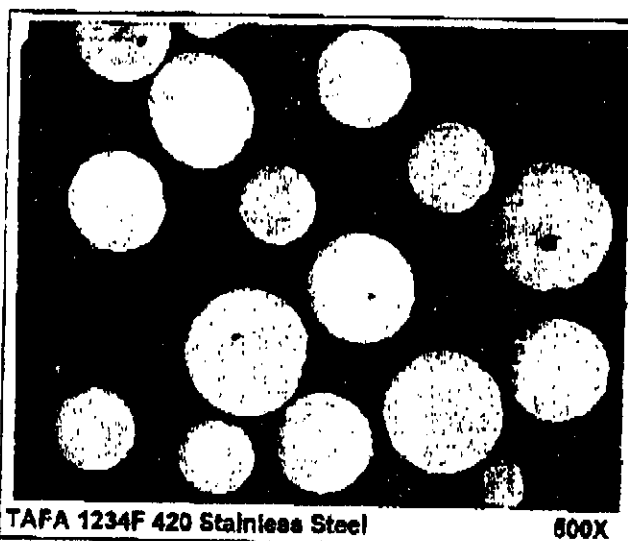
Particle Shape:

Mainly Spherical

Particle Size:

 -270 mesh (-53 μ)

AD (g/cm³) (ASTM B-212) typical: ?

HF (sec/60g) (ASTM B-213) typical: ?


This powder has been made exclusively for high velocity thermal spraying. Spraying with TAFE 1234F results in a dense, smooth coating that can be finished to a bright mirror-like surface. This powder is recommended when a hard coating is required with some corrosion resistance. The high chrome content provides fair high-temperature oxidation resistance. TAFE 1234F resists corrosion, oxidation and particle erosion at temperatures below 1000°F (540°C). TAFE 1234F can be used in the AF-3000 HVOF, TJ-4000 HVOF, JP-5000, JP-5000ST HP/HVOF and the Diamond Jet™.

Typical Applications:

- **Wear with Corrosion:** Journal sections, Seal rings, Pistons, Pump Plungers, Crankshaft bearings, Hydraulic rams
- **Cavitation:** Wear rings on hydraulic turbines, Diesel engine cylinder liners, Pumps
- **Particle Erosion, Medium Temperature:** Exhaust fans, Hydroelectric valves, Cyclone dust collectors, Pump valve plugs and seats

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

Diamond Jet™ is a trademark of Sulzer Metco, Inc.

Typical High Velocity Applied Coating Properties:

| | | |
|------------------|-------------|----------------------|
| Finish | As Sprayed | 185 -in AA |
| | Ground | Less than 10 -in AA |
| Bond Strength | | 7,000 psi |
| Hardness - | Superficial | ? R _{15N} |
| | Macro | ? R _C |
| | Micro | ? DPH ₃₀₀ |
| Microstructure - | Porosity | 1 - 4% |
| | Oxides | 3 - 5% |

The information provided herein is believed to be accurate and reliable; however, results may vary with workpiece preparation and operator technique. TAFE warrants only that the powders are free of defects in material and workmanship. No other warranty is expressed or implied.

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.

TAFE Delivers Your "Operating Advantage"

TAFE's primary objective is to ensure you consistently get the coating quality you require...with greatest application ease...at the lowest coating costs. TAFE accomplishes this by engineering the most advanced thermal spray materials and equipment available.

**Coating Performance + Ease-of-Use + Low Costs =
"Operating Advantage"**

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

TAFE INCORPORATED
World Headquarters
146 Pembroke Road, Concord, NH 03301 USA
tel.: +603.224.6585 fax: +603.226.4342
e-mail: info@tafa.com Internet address: <http://www.tafa.com>

TAFE SOUTH AMERICA
Rua Ferreira Viana, 422
Sao Paulo - SP - Brasil CEP 04781-010
tel.: +55 11 247 6665 fax: 55 11 521 0545
e-mail: div.tafa@outelctc.com.br

TAFE EUROPE, LTD
Eumel Meadow Road,
North Moors Mead, Redditch, WORCS, B96 9NZ, England
tel.: +44 (0) 1.527.838.700 fax: +44 (0) 1.527.838.749
e-mail: davies@tafa.com

©1998, TAFE INCORPORATED