

Bulletin

Powder Characteristics

TAFE 1272F *Nickel-Chromium Self-Fluxing Alloy*

Nominal Composition: % Weight

Chromium	13.5
Silicon	4.3
Iron	4
Boron	3
Carbon	0.65
Nickel	Balance

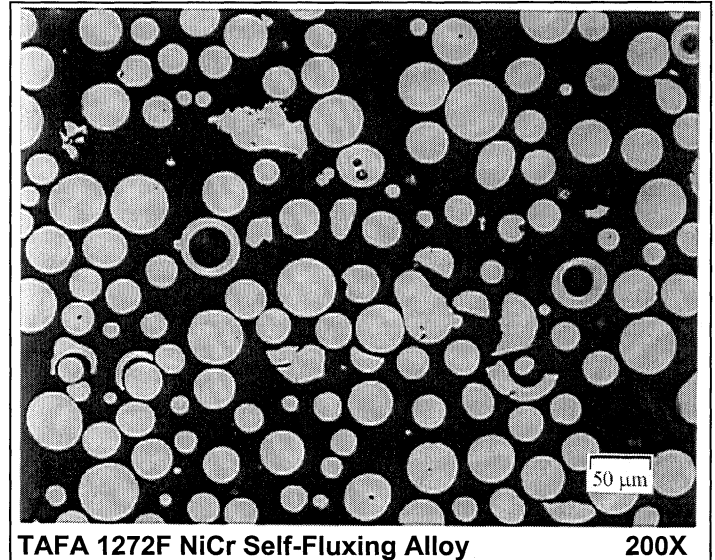
Powder Type: Gas Atomized

Particle Shape: Mainly Spherical

Particle Size: -270 mesh (-53 μ)/D

AD (g/cm³) (ASTM B-212) typical: 4.26

Hall Flow (sec/50g) (ASTM B-213) typical: 13.83



The TAFE 1272F powder is made exclusively for thermal spraying. Spraying with TAFE 1272F results in smooth coatings which are hard (R_c52), dense and corrosion resistant. Good finishes can be achieved with little stock removal. TAFE 1272F is a self-fluxing alloy that can be "fused" after spraying to produce an even denser coating that is essentially pore-free. Though in many cases the as sprayed coating produced is good enough to be used as is to replace spray and fused coatings. The coatings are excellent in resistance to abrasion, corrosion and galling. The coatings can be used in temperatures up to 1500°F (815°C).

Typical Applications:

- Abrasion and corrosion resistance to 1500°F (815°C)
- Pump cavitation wear
- Galling wear
- Ball joints
- Bearings
- Bushings
- Cams
- Pump shafts
- Valves, disks and seats
- Pistons
- Center tips
- Plug gauges
- Glass plungers

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

Typical High Velocity Applied Coating Properties:

Finish	As Sprayed Ground	260 - 280 $\mu\text{in } R_a$ Less than 10 $\mu\text{in } R_a$
Bond Strength		6,500 psi
Hardness -	Superficial Macro Micro	87 R_{15N} 52 R_C 770 - 875 DPH_{300}
Microstructure -	Porosity Oxides	1 - 2% Less than 1%

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: