Technical Datasheet

PMET 823 / GTD-222

April 2024

PRODUCT OVERVIEW

PMET 823 is a nickel based superalloy alloyed primarily with chromium, cobalt, titanium, and tungsten. PMET 823 is a gamma-prime strengthened alloy used commonly as a replacement for PMET 914.. Where PMET 823 excels over PMET 914 is the ability to exhibit superior low-cycle fatigue properties and enhanced creep resistance at higher temperatures. PMET 823 also exhibits excellent hot corrosion resistance up to 1600F..

TYPICAL DEPOSIT CHARACTERISTICS:

- ⇒ Density 0.289 lb/in^3
- ⇒ Melting Range: 2400-2550 F
- ⇒ Machinability: Good
- ⇒ Oxidation Resistance: Good
- ⇒ Corrosion Resistance: Excellent

APPLICATION

- ⇒ Gas Turbine Blades
- ⇒ Gas Turbine Vanes
- ⇒ Gas Turbine Nozzles

NOMINAL CHEMICAL COMPOSITION (wt%)

Ni	Cr	Co	W	Ta	Ti	Al
BAL	22.5	19.0	2.0	1.0	2.5	1.0

MECHANICAL PROPERTIES:

Tensile Strength		Yield Strength		Elongation
Ksi	MPa	Ksi	MPa	%
113	780	95	655	5

STANDARD SIZES:

Diameter

0.031” (0.8 mm)
0.035” (0.9 mm)
0.045” (1.2 mm)
0.062” (1.6 mm)

7397 Union Centre Blvd. West Chester, OH 45014 / Phone: 513-874-3586 / Fax: 513-874-2880

E-mail: sales@polymet.us