Technical Datasheet

PMET 818 Alloy 718

July 2019

PRODUCT OVERVIEW

Pmet 818 is a nickel based superalloy alloyed primarily with chromium, iron. niobium, and molybdenum. Pmet 818 is mainly used in welding components which encounter cryogenic temperatures including aircraft and rocket components. This alloys displays good tensile and fatigue strength at temperatures from cryogenic to 1200F. This alloy can be age hardened and is resistant to post -weld cracking.

TYPICAL DEPOSIT CHARACTERISTICS:

- ⇒ Density 0.296 lb/in^3
- ⇒ Melting Range: 2410-2540 F
- ⇒ Oxidation Resistance: Excellent
- ⇒ Corrosion Resistance: Good

APPLICATION

- ⇒ Aircraft Components
- ⇒ Liquid Fuel Rocket Systems
- ⇒ Cryogenic Tanks

SPECIFICATION

AMS 5832, EN: 2.4668, UNS: N07718, AWS: ERNiFeCr-2

NOMINAL CHEMICAL COMPOSITION (wt%)

Ni	Cr	Fe	Nb	Mo	Co	Ti	Si	Mn
BAL	19.0	17.0	5.0	3.0	1.0	1.0	<1.0	<1.0

MECHANICAL PROPERTIES:

Tensile Strength		Yield Strength		Elongation
Ksi	MPa	Ksi	MPa	%
158	1090	133	915	22

STANDARD SIZES & PACKAGING:

Diameter	Packaging
0.020” (0.5 mm)	18” and 36” Cut Lengths and 25# LWS
0.031” (0.8 mm)	18” and 36” Cut Lengths and 25# LWS
0.035” (0.9 mm)	18” and 36” Cut Lengths and 25# LWS
0.040” (1.0 mm)	18” and 36” Cut Lengths and 25# LWS
0.045” (1.2 mm)	18” and 36” Cut Lengths and 25# LWS
0.062” (1.6 mm)	18” and 36” Cut Lengths and 25# LWS
0.093” (2.4 mm)	18” and 36” Cut Lengths and 25# LWS

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

E-mail: sales@polymet.us