STURDELL INDUSTRIES INC.™

PM Plus Data Sheet

*Chemical Composition (Nominal Values Weight %)

C	Cr	V	Mo
2.20	14.5	9.0	1.1

***Composition shown is nominal. Actual chemical composition may vary.**

Characteristics

PM Plus is a high wear resistant powder metal stainless steel. PM Plus is used in plastics processing and extrusion where a combination of corrosion resistance and wear is necessary.

PM Plus consistently demonstrates the following characteristics:

- Good resistance to corrosive environments
- Excellent wear resistance
- Superior dimensional stability in heat treatment
- Ability to be EDM machined easily

Applications

PM Plus applications include: plastic extrusion tooling, injection mold inserts, injection mold components, high wear stainless applications.

Heat Treatment of PM Plus

Annealing
PM PLUS should be heated thoroughly to 1650°F in an atmosphere controlled furnace. Hold 2 hours, furnace cool at 25°F per/hr to 1100°F, then air cool to room temperature. A maximum hardness of 250 BHN should result.

Hardening
Preheat: 1200-1300°F, equalize temperature, hold 2 hours.
Austenitize: 2000-2100°F, equalize temperature, hold 30-45 minutes.
Quench: Positive pressure (2 bar minimum) quench to below 125°F.
Temper: Double temper at 400-800°F, equalize temperature, hold 2 hours minimum. Double temper recommended.
Typical hardness: 56-60 HRC.

Stress Relieving
Annealed material: Heat to 1000-1200°F, hold 2 hours, then air cool.
Hardened material: Heat to 25-50°F below heat treat tempering temperature, hold 2 hours, then air cool.

EDM
Hardened material: Heat to 25-50°F below heat treat tempering temperature, hold 2 hours, then air cool.

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Rev_1 July 19/2019