

Feedstock MIM

烧结后典型成分		Fe	C	Cr	Ni	Nb	Mn	Mo	P	Si
(按重量百分比计算)	>	0.0	0.9	16.0	0.0	2.5	0.0	0.0	0.0	0.0
Typical composition after Sintering	<	Bal.	1.25	18.0	0.6	3.5	1.0	0.75	0.045	1.0

典型特性 Typical properties	Yield strength R _{p02}		
	抗拉强度 Tensile strength	>700 MPa	/
	延伸率 Elongation A ₁₀	>1%	/
	硬度 Hardness	30-39HRC	>52 HRC
	盐雾测试 Salt spray test	24h	

Injection process	<p>其余注塑工艺参数受到产品形状及要求影响较大，故未写出。</p> <p>需要注意的是，注塑工艺的设置对于产品的生坯密度有着较大的影响，而这也可能导致产品最终尺寸和其他要求不符使用者的期望。</p> <p>Other injection molding process parameters are greatly affected by product shape and requirements, so they are not written out.</p> <p>It should be noted that the setting of injection molding process has a great influence on the green density of the product, which may also cause the final size of the product and other requirements do not meet the user's expectations.</p>
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脱脂工艺 Demanding process	脱脂酸 Debinding acid	98% HNO ₃
	脱脂温度 Debinding temperature	100-150°C
	脱脂时间 Debinding time	取决于零件厚度 Depending on part thickness (e.g. 3mm part approx. 3h)
	脱脂率 Debinding rate	当生坯最低脱脂率, 达到 7.2%时, 可以终止脱脂制程。 When the minimum debinding rate of green part reaches 7.2%, the debinding process can be terminated.
烧结工艺 Sintering process	烧结气氛 Sintering atmosphere	氩气烧结 100% dry argon
	烧结载具 Sintering substrate	氧化铝陶瓷片 Non-metallic base (e.g. Al ₂ O ₃)
	负压脱脂 Negative pressure debinding	从室温升高至 600°C过程中, 采用有多段持温的负压脱脂, 以确保剩余粘结剂能被脱脂干净, 总时间 450min 左右。 From room temperature to 600 °C, vacuum debinding with multi-stage holding temperature is used to ensure that the remaining binder can be removed completely, and the total time is around 450 min.
	真空烧结 Vacuum sintering	从 600°C以 3°C/min 升温至 850 摄氏度持温一段时间进行真空内烧, 目的是确保产品碳含量在合理区间。 From 600 °C to 850 °C at 3 °C / min and holding for a period of time, the vacuum internal sintering is carried out to ensure that the carbon content of the product is in a reasonable range.
	分压烧结 Partial pressure sintering	从 850°C以 3°C/min 升温至 1050°C后短暂持温, 之后以同样的升温速度升高至 1250°C, 使得材料致密化, 最后随炉冷却。 From 850 °C to 1050 °C at 3 °C/ min, holding for a short time, and then it was raised to 1250 °C at the same heating rate for material densify, and finally cooled with the furnace.
保质期 Shelf life	如果储存得当: 12 个月, 防止原料受潮。 If stored appropriately, 12 months. Protect feedstock against moisture.	

免责声明: 本物性表仅基于我们的知识和经验得出, 具有一定的参考意义, 但由于影响产品最终要求和性能的因素众多, 并不能完全排除使用者由于各种原因导致与期望不符的现象。

Disclaimer: This datasheet is only based on our knowledge and experience, which has certain reference significance. However, it cannot completely exclude the user's non-compliance with expectations due to various reasons, because there exist many uncontrolled factors affecting the final requirements and performance of the products.