Shenzhen Kadam Technology Co., Ltd. A207, Hanhaida Technology Park, #11 Lougang Avenue, Songgang, Shenzhen

Kadam® Datasheet for MIM420

Product Descriptions	Ready-to-mold granules for the production of sintered components called martensitic stainless steel 420 using water atomized powder based on							
	catalytic	debinding	process.					
Product Standards								
Product Specifications	Items MFI g/ Sintering Density g		Unit		SPC.	Measuring method		
			g/10min		>400	ISO1133(21.6Kg,190℃) ISO3369		
			g/cm3	/cm3 ≥7.6				
Typical composition	C %	Cr %	Mo %	Ni %	Nb %	Mn %	Si %	Fe %
	0.35-0.5	12~14	≦0.65	≦0.6	1.0-2.0	≦1.0	≦	Balance
after Sintering								
after Sintering							1.0	
after Sintering Processing							1.0	
atter Sintering Processing	Processir	ig on stand	lard inject	ion mo	lding mac	hines for	1.0 thermop	lastic
after Sintering Processing	Processir	ig on stand	lard inject	ion mo inding	lding mac	hines for	1.0 thermop	lastic
after Sintering Processing	Processin	ng on stand , using cat	lard inject alytic deb	ion mo inding	lding mac process.	hines for	1.0 thermop	lastic
after Sintering Processing Characteristic Properties of	Processir	ng on stand	lard inject alytic deb	ion mo inding	lding mac process.	hines for	1.0 thermop	lastic
after Sintering Processing Characteristic Properties of Sintered Parts	Processin polymers	ng on stand	lard inject alytic deb	ion mo inding As Sir	lding mac process. ttered	hines for Hea	1.0 thermop t Treated	lastic
after Sintering Processing Characteristic Properties of Sintered Parts	Processir polymers Yield Stre	ng on stanc , using cat	lard inject alytic deb	ion mo inding As Sir ≧ 6501	lding mac process. ntered MPa	hines for Hea 	1.0 thermop t Treated	lastic
atter Sintering Processing Characteristic Properties of Sintered Parts	Processin polymers Yield Stre Ultimate 7	ng on stand , using cat ngth Fensile Stre	lard inject alytic deb ngth	ion mo inding As Sir ≧ 6501 ≧ 8001	lding mac process. ntered MPa MPa	hines for Hea ≧ 1	1.0 thermop t Treated	lastic
after Sintering Processing Characteristic Properties of Sintered Parts	Processin polymers Yield Stre Ultimate T Elongation	ng on stand , using cat ngth Fensile Stre n percentag	lard inject alytic deb ngth e	ion mo inding As Sir ≥ 6501 ≥ 800N ≥ 0.97	lding mac process. ntered MPa MPa	hines for Hea ≧ 1 ≧ (1.0 thermop t Treated 1560Mpa).85	lastic
after Sintering Processing Characteristic Properties of Sintered Parts	Processin polymers Yield Stre Ultimate T Elongation Hardness	ng on stand , using cat ngth Fensile Stre n percentag	lard inject alytic deb ngth e	ion mo inding As Sir ≧ 650N ≧ 800N ≧ 0.97 ≧ 600F	lding mac process. ntered MPa MPa IV	hines for Hea ≥ 1 ≥ 1 ≥ 1 ≥ 1	1.0 thermop t Treated 1560Mpa 0.85 730HV	lastic
atter Sintering Processing Characteristic Properties of Sintered Parts	Processin polymers Yield Stre Ultimate 7 Elongation Hardness Oversizing	ng on stand , using cat ngth Fensile Stre n percentag g factor *	lard inject alytic deb ngth e 1.216	ion mo inding As Sir ≥ 650 ≥ 800 ≥ 0.97 ≥ 600 F ≈ 600 F	lding mac process. ntered MPa MPa IV 5 (Sintering	hines for Hea ≧ 1 ≥ (≥ 2 g density 7	1.0 thermop t Treated 1560Mpa 0.85 730HV 7.6@1345	lastic l
after Sintering Processing Characteristic Properties of Sintered Parts	Processin polymers Yield Stre Ultimate 7 Elongation Hardness Oversizing	ng on stand , using cat ngth Fensile Stre n percentag g factor *	lard inject alytic deb ngth e 1.216	ion mo inding As Sir ≥ 650 ≥ 800 ≥ 0.97 ≥ 600 ≥ 0.0	lding mac process. ntered MPa MPa IV 5 (Sintering	hines for Hea ≥ 1 ≥ 1 ≥ 1 $\equiv 1$	1.0 thermop t Treated 1560Mpa).85 730HV 7.6@1345	lastic l
after Sintering Processing Characteristic Properties of Sintered Parts	Processin polymers Yield Stre Ultimate T Elongation Hardness Oversizing The oversi	ng on stand , using cat ngth Fensile Stre n percentag g factor * izing factor	lard inject alytic deb ngth e 1.216 is only for	ion mo inding As Sir ≥ 6501 ≥ 8001 ≥ 0.97 ≥ 6001 0 ± 0.0 referen	lding mac process. ntered MPa MPa IV 5 (Sintering ce as the di	hines for Hea ≥ 1 ≥ 1 = 1 = 1 ≥ 1 = 1 ≥ 1 ≥ 1 ≥ 1 = 1 ≥ 1 ≥ 1 ≥ 1 = 1 ≥ 1 = 1 = 1	1.0 thermop t Treated 1560Mpa 0.85 730HV 7.6@1345 f the para	lastic I I I°℃) ameters us

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Injection Molding								
	Ва	arrel temperature	Zone 1 Zone 2 Zone 3 Nozzle					
			180°C 185°C 190°C 195°C					
	Μ	lold temperature	90~125					
	Sc	crew speed	50/min					
	In	jection speed	10 cm ³ /s					
	М	lolding pressure	900 bar					
	Н	olding pressure	900 bar					
	Н	olding time	0.1~3s					
	* The conditions a machine .Make su destroy the materi	above are only for refe are the barrel temperation ial and shorten the recy	rence as the differences of the mold or injection molding are is lower than 200 °C.Too high temperature would cle life.					
Debinding	Debinding according to catalytic debinding process at 110~145°C using HNO ₃ > 98%.The debinding process is finished when a minimal debinding loss of 9.2% is reached.							
Sintering	A typical sintering cycle is: room temperature - 5K/min - 600°C , hold 1h, $600^{\circ}C - 5$ K/min - 1345°C, hold 3 h furnace cooling							
Heat Treatment	Annealing: Ar 910 °C, 2 h/furnace cool to 500 °C							
	Hardening: Ar 1020 °C, 15 min/oil							
	Tempering: air 200 °C, 1 h							
	Following the above described heat treatment a hardness of > 48 HRC							
	should be reac	hed.						
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