

OTHER ALLOYS

Advamet® or Advacat® CoCrMo Datasheet

Advamet® is a wax/polymer binder system;

Advacat® is a POM based (catalytic) binder system.

Typical Chemical Composition (post Sinter)

C (%)	Cr (%)	Fe (%)	Mn (%)	Mo (%)	Ni (%)	Si (%)	Co (%)
0.000-0.015	27.0-30.0	0.00-0.75	0.00-1.00	5.0-7.0	0.000-0.100	0.00-1.00	balance

Other elements not to exceed 1.0% combined.

All percentages are in weight percent.

Typical Mechanical Properties

Nominal Typical Values	Density	UTS	YS	Elongation	Hardness
	(g/cm ³)	(ksi)	(ksi)	(in./in.)	(HRC)
As-sintered Grade	8.4	123	75	20	25

Actual results depend on processing – sintering and heat treatment cycles – used.



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OTHER ALLOYS

Advamet® Copper Datasheet

Advamet® is a wax/polymer binder system;
Compliant to MPIF Standard 35: MIM-Copper

Typical Chemical Composition (post Sinter)

Cu (%)
99.8 -100

Typical Particle Size Distribution

d_{90}
-22micron

Typical Physical Properties

Mechanical	Density	Thermal Conductivity (@ 77°F)	UTS	YS	Elongation
Units	(g/cm ³)	Btu *ft/(h*ft ² *°F)	(ksi)	(ksi)	(in./in.)
As-sintered	8.75	208	30	10	30

Coefficient of Thermal Expansion	Average CTE {x10 ⁶ /°F}
From Room Temp. to 100°F	8.7
From 101°F to 150°F	8.9
From 151°F to 200°F	9.1
From 201°F to 250°F	9.3
From 251°F to 300°F	9.4

Actual results depend on processing, including sintering cycle - performed.



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OTHER ALLOYS

Advamet® or Advacat® MIM2200

Advamet® is a wax/polymer binder system;

Advacat® is a POM based (catalytic) binder system.

Both systems are compliant to MPIF Standard 35: MIM-2200

Typical Chemical Composition (post Sinter)

C (%)	Ni (%)	Mo (%)	Si (%)	Fe (%)
0.1 max	1.5-2.5	0.5 max	1.0 max	balance
Other elements not to exceed 1.0% combined.				
All percentages are in weight percent.				

Typical Mechanical Properties

Nominal Typical Values	Density	UTS	YS	Elongation	Charpy unnotched impact	Apparent Hardness
	(g/cm ³)	(ksi)	(ksi)	(in./in.)	(ft* lbf)	(HRB)
As-sintered	7.65	42	18	40	100	45

Actual results depend on processing – sintering and heat treatment cycles – used.



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OTHER ALLOYS

Advamet® or Advacat® MIM 52100 Datasheet

Advamet® is a wax/polymer binder system;

Advacat® is a POM based (catalytic) binder system.

Typical Chemical Composition (post Sinter)

C (%)	Cr (%)	Si (%)	Ni (%)	Cu (%)	Mo (%)	P (%)	S (%)	Fe (%)
0.98-1.10	1.30-1.60	0.15-0.30	0.25 max	0.35 max	0.10 max	0.025 max	0.025 max	balance

Other elements not to exceed 1.0% combined. Manganese is an optional element for MIM applications.

All percentages are in weight percent.

Typical Mechanical Properties

Nominal Typical Values	Density (g/cm ³)	UTS (ksi)	YS (ksi)	Elongation (in./in.)	Hardness (HRC)
As-sintered	7.5	145	94	5	35 max
Heat Treated	7.5	218	160	2	60-65

Actual results depend on processing – sintering and heat treatment cycles – used.



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