CONTROLLED-EXPANSION ALLOYS

Advamet® or Advacat® F-15 Datasheet

Advamet® is a wax/polymer binder system;

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

Both systems are compliant to MPIF Standard 35: MIM-F-15

Typical Chemical Composition (post Sinter)

Al (%)	C (%)	Co (%)	Cu (%)	Cr (%)	Mg (%)	Mn (%)
0.10 max	0.04 max	17	0.20 max	0.20 max	0.10 max	0.50 max
Mo (%)	Ni (%)	Si (%)	Ti (%)	Zr (%)		Fe (%)
0.20 max	29	0.20 max	0.10 max	0.10 max		balance
Other elements not to exceed 1.0% combined.						
All percentages are in weight percent.						

Typical Mechanical and Coefficient of Thermal Expansion Properties

Nominal Typical Values	Density	UTS	YS	Elongation	Ave. CTE to 212^{0}F	Ave. CTE to 302^{0}F	Ave. CTE to 392^{0}F	Ave. CTE to 482^{0}F	Ave. CTE to 572^{0}F
	(g/cm^3)	(ksi)	(ksi)	(in./in.)	(X 10^{-6}/^{0}F)	(X 10^{-6}/^{0}F)	(X 10^{-6}/^{0}F)	(X 10^{-6}/^{0}F)	(X 10^{-6}/^{0}F)
As-sintered	7.8	67	43	25	3.7	3.4	3.2	3.1	3.0

*CTE was determined using a push-rod dilatometer using a 3.6°F/minute heating rate in nitrogen.
Average CTE was determined from 68° F up to the given temperature.

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

AMP advanced metalworking practices

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AMP
Your Partner for MIM Feedstocks

Ferrous, Non-Ferrous and Specialty Alloys

Below is a list of our common alloys and tool steels. However, other alloys and custom toll services are also available upon request.

Stainless Steels	Low Alloys	Tool Steels	Specialty Alloys
304L	1010	A2	CoCrMo
316L	1080	D2	Copper
420	MIM 2200	H13	CP Ti
430	MIM 2700/FN08	M2	Ti-6Al-4V
440	FN02	M4	Fe-3Si
465	FN-0205	S7	F15
17-4 PH	4140 (42CrMo4)		F75
	4340		Fe49Co2V
	4650 (4605)		Fe50Co
	8620		Fe50Ni
	8740		Fe79Ni4Mo
	52100 (100Cr6)		Inconel 625
			Inconel 718
			Silver Alloys
			Tungsten Heavy Alloys
			Tungsten Carbides

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