

SOFT-MAGNETIC ALLOYS

Advamet® or Advacat® Fe-3%Si 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-Fe-3%Si

Typical Chemical Composition (post Sinter)

| C (%) | Si (%) | Fe (%) |
|----------|---------|---------|
| 0.05 max | 2.5-3.5 | 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 | Mag. Perm | H _c | B _r | B ₂₅ | B ₅₀₀ |
|------------------------|----------------------|-------|-------|------------|-----------|----------------|----------------|-----------------|------------------|
| | (g/cm ³) | (ksi) | (ksi) | (in./in.) | μ max | Oe | kG | kG | kG |
| As-sintered Grade 1 | 7.62 | 77 | 57 | 24 | 8,500 | 0.7 | 12.0 | 14.5 | 19.5 |
| As-sintered Grade 2 | 7.50 | 77 | 57 | 24 | 6,000 | 1.0 | 12.0 | 14.5 | 19.0 |

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



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