



IRON CHROME COBALT (FECRCO):

Explore the Tone-Shaping Potential of FeCrCo for Guitar Pickups

Iron Chrome Cobalt (FeCrCo) is a cobalt-chromium-based magnetic alloy originally developed as a replacement for CuNiFe. It is now gaining popularity in the audio and guitar industries as a high-performance alternative to AlNiCo—delivering vintage tone with modern manufacturability.

Key Properties:

Property	Value / Benefit
High Remanence (Br)	Warm tonal output, comparable to AlNiCo pickups
Low Coercivity (Hc)	Easily magnetized and shaped for precision field control
High Temp Resistance	Stable performance across a wide range of temperatures
Low Temp Coefficient	Predictable behavior under changing conditions
Corrosion Resistance	No coating required—ideal for long-term durability

Manufacturing Advantages:

- **Ductile and Formable:** Can be rolled, stamped, and bent before heat treatment
- **Machinable:** Easier to process than traditional AlNiCo or rare earth alloys
- **Thin Strip Capability:** Can be formed into very thin strips for compact designs
- **No Post-Coating Required:** Simplifies production and reduces cost



Available Forms:

- **Isotropic:** Multi-directional magnetization
- **Anisotropic:** Enhanced directional magnetic performance

Recommended Applications

- Magnetic pole pieces and slugs for guitar pickups
- Magnetic cores for custom audio transducers
- Prototype pickup designs requiring material flexibility and tonal warmth

Why Choose FeCrCo?

FeCrCo offers the tonal character of classic materials with the manufacturability modern pickup designers need. It bridges the gap between vintage warmth and production flexibility—making it an excellent choice for builders and engineers in the audio space.



Typical Magnetic Performance Range for Cast FeCrCo

Grade	Br		Hcb		Hcj		BHmax		Density	Remark
	kGs	mT	kA/m	Oe	kA/m	Oe	KJ/m ³	MGOe	g/cm ³	
FeCrCo12/4	8.8	880	42	530	42	530	12	1.5	7.6	Isotropic
FeCrCo44/4	13	1350	48	600	49	620	52	6.5	7.7	Anisotropic

FeCrCo12/4 (referred to as FeCrCo1) and FeCrCo44/4 (referred to as FeCrCo5) are the two most commonly used Iron Chromium Cobalt materials. The other materials are available but may have a larger min order quantity.

Contact Us

Looking for a material that delivers vintage tone with modern manufacturability? Contact Allstar Magnetics—your trusted partner for FeCrCo prototyping and full-scale production, specializing in magnetic solutions for audio and guitar applications..

Comprehensive magnetic solutions, all in one place.



(360) 693-0213
15100 NE 65th, Suite170,
Vancouver, WA 98682

sales@allstarmagnetics.com

AllstarMagnetics.com