

PRODUCT FAMILY DATASHEET

PHOSPHOR BRONZE BANDING STRAPS

C510 Phosphor Bronze · Grade A Spring Temper



MADE IN THE USA

DFARS COMPLIANT

RoHS 3 / REACH

WOSB CERTIFIED

PHOSPHOR BRONZE BANDING STRAPS

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1 Product Description

CoreTight™ phosphor bronze banding straps are precision metal strapping used to mechanically retain magnetic-component assemblies — C-core and cut-core transformers, inductors, reactors, and stacked magnetic or electronic assemblies. Applied with a pneumatic tensioning tool and secured with a matching formed seal, the strap holds controlled circumferential compression on the core stack.

Phosphor bronze is selected for high fatigue life and spring-back retention in high-vibration and aerospace assemblies, combined with good electrical conductivity and excellent corrosion resistance.

2 Material & Metallurgy

Alloy	C51000 phosphor bronze — nominal 94.8% Cu / 5% Sn / 0.2% P
Temper	Grade A spring temper
Governing material spec	ASTM B103 (phosphor bronze strip)
Finish	Bare / uncoated — no plated coating

Typical properties (representative for C51000, spring temper; actual results on the material certification supplied with each lot):

Property	Typical value
Nominal composition	Cu balance, Sn 4.2–5.8%, P 0.03–0.35%
Tensile strength	~80–95 ksi (550–650 MPa)
Fatigue strength	Excellent — spring temper
Electrical conductivity	~15–20% IACS
Service temperature	Suited to elevated-temperature service
Density	0.320 lb/in³ (8.86 g/cm³)

3 Dimensions & Available Sizes

Part Number	Legacy	Thickness	Width	Roll Length	Temper
PB-006-187	1C	0.006"	0.187"	300 ft	Spring
PB-006-375	2C	0.006"	0.375"	300 ft	Spring
PB-012-375	5C	0.012"	0.375"	300 ft	Spring
PB-012-500	6C	0.012"	0.500"	200 ft	Spring

Tolerances: width ±0.005" · thickness ±0.001". Custom sizes and materials available on request.

4 Finish

Supplied bare (uncoated). Phosphor bronze carries inherent corrosion resistance and has no defined shelf life under normal storage.

5 Compliance & Traceability

Country of origin	Made in the USA — Hubbard, OH
Regulatory	RoHS 3 compliant · REACH screened (253 SVHC) · WEEE · Conflict Minerals addressed
Defense / trade	DFARS 252.225-7014 specialty-metals exempt (commercial item) · ECCN EAR99

Federal identifiers	CAGE 8GNP1 · DLA NSN 5935-01-451-1377 · JCP / DD-2345 · CMMC Level 1
Quality system	QM001 Rev E (ISO 9001-based)
Business status	WOSB · WBENC certified
Traceability	Certificate of Conformance and mill / heat certifications available with shipment; lot-controlled to aerospace and defense requirements.

6 Packaging

Supplied as coils in self-dispensing cartons, each labeled with part number, dimensions, material, and lot identification.

7 Ordering Information & Notes

- Part numbers follow [Material]–[Thickness]–[Width]; phosphor bronze straps carry the PB prefix.
- Full engineering drawings available upon request.
- Custom sizes, seals, and pneumatic / manual tooling available.

The customer is responsible for determining the suitability of the product for its application and assumes all risk resulting from its use. Properties stated are typical for the alloy and condition and are provided for reference only; refer to the material certification supplied with each lot for actual values. All documents substantiating origin, materials, and processes are maintained on file.