

Low-Pb Free Cutting Phosphor Bronze

Currently the RoHS/ELV limit for Lead is less than 4%.

It is expected to soon be reduced further.

Our new patented product has less than half the Lead as the standard material while maintaining unchanged machining performance.

Since the alloying elements are unchanged there are no recycling issues. It also has processing hardenability and mechanical properties comparable to standard Phosphor bronze.

This is the environmentally friendly low-Pb phosphor bronze.

Alloy Composition

Alloy No.	Chemical Composition (wt %)						
	Cu	Pb	Fe	Sn	Zn	P	Cu+Sn+Zn+Pb+P
FX418	—	1.5-2.0	0.10 max.	4.8-7.6	1.8-8.0	0.03-0.35	99.5 min.
FX408	—	0.7-1.0	0.10 max.	4.8-7.6	1.8-8.0	0.03-0.35	99.5 min.

wt%

Product features

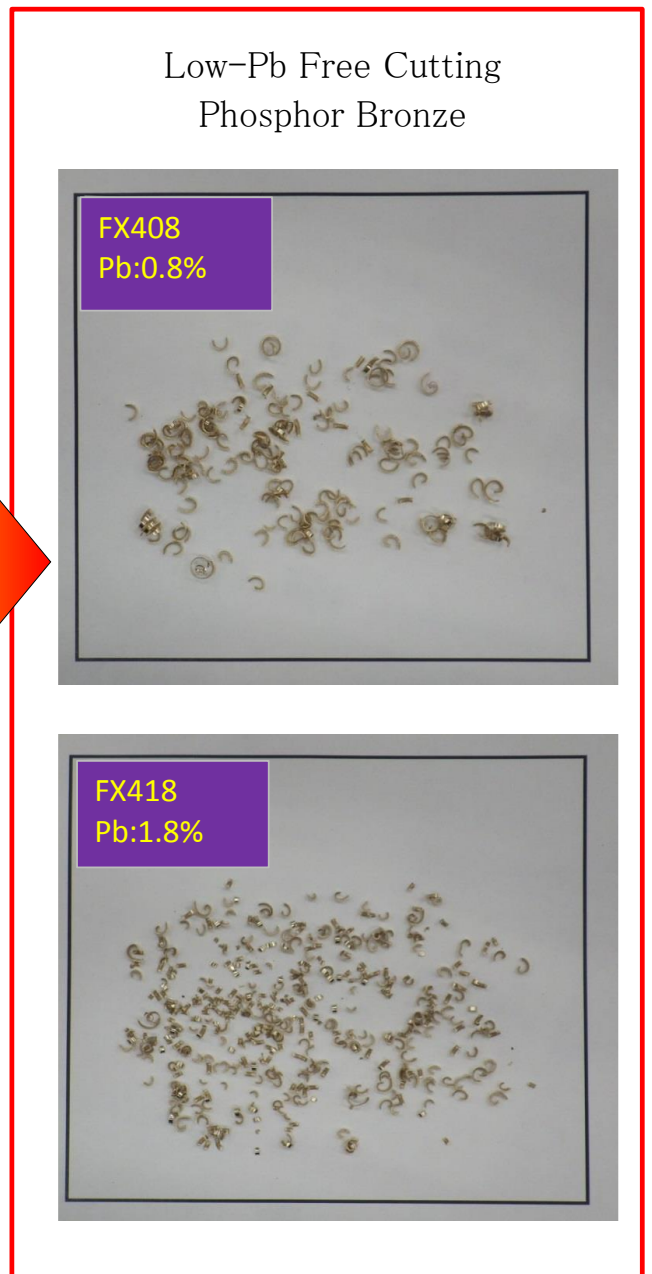
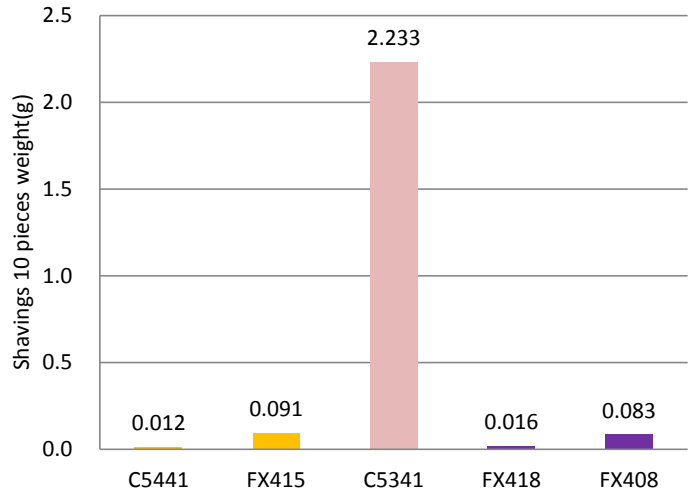
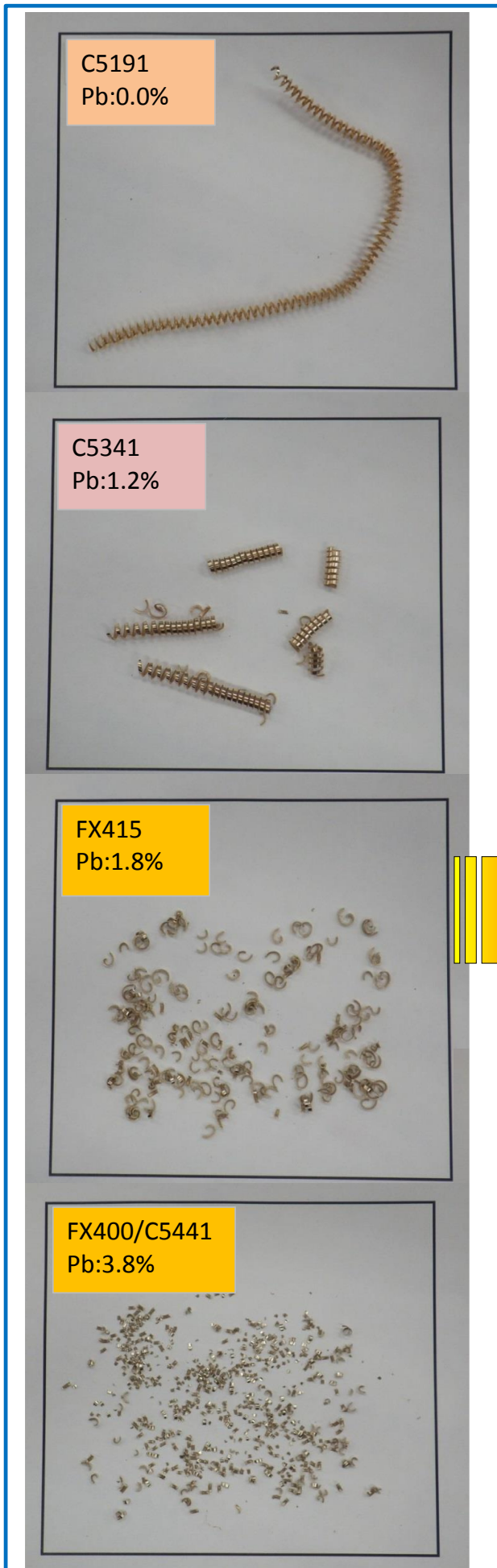
Alloy No.	Temper	Size [mm]	Tensile Strength [N/mm ²]	Elongation [%]
FX418 FX408	H	1 - 6 max.	600 min.	—
		6 - 13 max.	560 min.	8 min.
		13 - 25 max.	510 min.	10 min.
	1/2H	1 - 6 max.	440 min.	—
		6 - 13 max.	410 min.	10 min.
		13 - 25 max.	375 min.	12 min.

Physical property

Alloy No.	Specific weight	Heat conductivity [W/(m·K)]	Electric conductivity [%IACS]	Volume resistivity [10 ⁻³ μ Ω·m]
FX418	8.79	67	13	133
FX408	8.77	67	13	131

for inquiries or information

○Shavings shape of the outer peripheral milling



※Conditions φ17

Rotational speed450rpm、Feed pitch0.75mm、Depth cut0.5mm