



DuraKapp™#4X Babbitt

Description

DuraKapp™#4X Nickel Babbitt adds Nickel to the #2 Babbitt matrix to increase tensile and compression strength in high temperature bearings. Kapp Alloy uses special high grade virgin raw materials and proprietary Precision Microcasting™ process to produce the most consistent superior strength Babbitt available.

DuraKapp™#4X Nickel Babbitt lasts longer under severe service because it provides higher strength at higher temperatures without sacrificing ductility. In any bearing application, strength without ductility leads to bearing failure.

Benefits & Features

- Holds the oil film
- Pours freely and fills all liner crevices
- Anti-frictional
- Cannot cut the shaft
- Resists high temperatures
- High thermal conductivity

Applications

- Compressors and blowers
- Marine and locomotive diesel engines
- Marine bearings
- Reduction gears
- Dredges
- Lumber and cement mills
- Rock and gravel machinery
- Paired with [KappaTinning™ Compound](#) and [Kapp CopperBond™ Flux](#)
- Steel mills
- Mining machinery
- Sugar mills
- Paper mills
- Crushers
- Electric railroads
- Clay working machinery

Properties

Specification		
ASTM B23:		None
QQ-T-90A:		4xxxx Nickel, Premier Nickel
Composition		
Sn (Tin):		88.8%
Sb (Antimony):		7.5%
Cu (Copper):		3.5%
Ni (Nickel):		0.2%
Chemical Composition Limits	Minimum	Maximum
Sn (Tin):	88.00%	90.00%
Sb (Antimony):	7.00%	8.00%
Cu (Copper):	3.00%	4.00%
Pb (Lead):		<0.35%
Fe (Iron):		<0.08%
As (Arsenic):		<0.10%
Bi (Bismuth):		<0.08%
Zn (Zinc):		<0.005%
Al (Aluminum):		<0.005%
Cd (Cadmium):		<0.05%
Ni (Nickel):	0.10%	0.30%



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Technical Data	
Melting Temperature Range:	466-669°F (241-354°C)
Pouring Temperature:	795-805°F (424-429°C)
Density:	0.2667 lbs/in ³
Specific Gravity:	7.39 g/cm ³
Brinell Hardness:	24.5/12
Brinell Hardness @ 68°F (20°C):	27
Tensile Strength:	9,200 psi
Tensile Strength (Chill Cast):	15,200 psi (104.5 MPa)
Elongation on Break:	8%
Fatigue Strength:	6,460 psi (44.4 MPa)
Compressive Strength:	12,880 psi (6.44 tons/in ²)
Yield Point, Compression at Temperature:	@ 68°F (20°C) = 8,240 psi (56.7 MPa); @ 212°F (100°C) = 3,800 psi (26.2 MPa)

Product Variants

DuraKapp™#4X is available in standard forms:

- 35 lb. (15.9 kg) ingots
- 6 lb. (2.7 kg) notch bars
- 1 lb. (0.5 kg) bars

Also available in standard spray wire forms on 25 lb spools or in 250 lb. Payout Paks:

- 1/8" (0.125") (3.2mm)
- 0.098" (2.5mm)
- 0.079" (2mm)
- 0.062" (1.6mm)

Custom alloys and forms are our specialty. Call Kapp Alloy to discuss your specific project.