



DuraKapp™#1 Babbitt

Description

DuraKapp™#1 is a Lead-free, high Tin-based Babbitt known for its ability to withstand high pressure, high temperature, and friction. Kapp Alloy combines high purity virgin raw materials and our proprietary Precision Microcasting™ process to create the world's strongest, most consistent Tin-based Babbitt. **DuraKapp™#1** Babbitt meets or exceeds the specifications for ASTM #1 Babbitt - also known as #1, No. 1, or Grade 1 Babbitt.

Applications

- Bearings and high pressure applications such as those found in: Steel Mills, motors, generators, and marine applications
- Paired with [KappaTinning™ Compound](#) and [Kapp CopperBond™ Flux](#)

Properties

Specification			
ASTM B23:			Grade 1
QQ-T-90A:			No.1
Composition			%
Sn (Tin):			90.0-92.0%
Sb (Antimony):			4.0-5.0%
Cu (Copper):			4.0-5.0%
Pb (Lead):			0.35% (max.)
Technical Data	Metric	English	Comments
Density:	7.34 g/cc	0.265 lb/in ³	
Hardness, Brinell:	17	17	10 mm ball/500 kg load-30 sec.
Tensile Strength, Ultimate:	62.0 MPa	8,990 psi	Diecast
	64.0 MPa	9,280 psi	Chill cast
Elongation at Break:	2.0 %	2.0 %	in 50 mm
Modulus of Elasticity:	50.0 GPa	7250 ksi	
Compressive Yield Strength:	30.3 MPa	4,390 psi	@ 68°F (20°C);
	18.3 MPa	2,650 psi	@ 212°F (100°C)
Ultimate Compressive Strength:	88.6 MPa	12,900 psi	
Fatigue Strength:	26.0 MPa @ 2.00 ⁷ Cycles	3,770 psi @ 2.00 ⁷ Cycles	Chill cast, R.R. Moore Test
Izod Impact:	3.40 J	2.51 ft-lb	Chill Cast
Johnson's Apparent Elastic Limit:	16.9 MPa 7.2 MPa	2,450 psi; 1,050 psi	68°F (20°C); 212°F (100°C)
Melting Range:	433-700°F (223-371°C)		
Pouring Temperature:	441°F (227°C)		

Product Variants

*Available in standard forms: 35 lb. (15.9 kg) ingots, 6 lb. (2.7 kg) notch bars, and nominal 1 lb. (0.5 kg) bars. Custom alloys and forms are our specialty. Call Kapp Alloy to discuss your specific project.