

Product Information

FELDER Bearing Metal MS²

Lead-free babbitt metal Sn81,3Sb12Cu6Zn0,6Ag0,1

Item no.: 137700551

All information about our products is the result of our long standing experience which we would like to pass on to our customers as application support. However, as we do not have any influence on the application of the works carried out with our products, please see the warranty claims in our conditions of sale because our liability is limited.

This product information does not constitute warranted properties.

Description

FELDER Bearing Metal MS² (Maximum Static Load and Speed) is free of lead, cadmium, arsenic and nickel. It is used for the highest requirements of the static load as well as of high hydrodynamic sliding speeds.

FELDER Bearing Metal MS² shows a very strong resistance to high-frequency dynamic alternating stress. Furthermore, it has a good impact load and stability of shape with low creep deformation.

Fields of application:

- axial- and radial bearings (especially of high-speed turbo machines)
- piston- and expansion engines
- generator bearings
- compressors and transmissions
- ship drives

Properties

Melting range in °C	235 - 360		
Casting temperature in °C	520		
Coefficient of linear thermal expansion at 20-100°C in K ⁻¹	21·10 ⁻⁶		
Bond strength (steel C10, bearing metal thickness ≥ 6mm)(DIN ISO 4386-2) in N/mm ²	71		
Bending fatigue strength in N/mm ²	approx. 35		
Medium number of impact to fracture	2856		
Medium of impact energy to fracture in J	785		
Density in kg/dm ³	7,35		
at 20° C			
at 100° C			
Compressive stress	0,2 % Offset yield strength in N/mm ²	90	50
	2 % Offset yield strength in N/mm ²	107	64
	Compressive strength in N/mm ²	190	91
	Strain at failure	36	44
Tensile stress	0,2 % Expansion limit in N/mm ²	76	
	Tensile strength in N/mm ²	77	
	Modulus of elasticity in kN/mm ²	57	
	Elongation in %	1	

Composition of Alloy and Tolerances

Composition of Alloy	Tolerances in %			
	Antimony (Sb)	Copper (Cu)	Zinc (Zn)	Silver (Ag)
Sn81,3Sb12Cu6Zn0,6Ag0,1	11 - 13	5,5 - 6,5	0,5 - 0,7	0,05 - 0,15

Application Advice

FELDER Bearing Metal MS² can be used with all known applications. These are among others the centrifugal- and static casting procedure. A pre-tinning of the bearing support elements is essentially for the anchoring of the bearing metal. This is carried out by dipping into a solder bath or, with larger bearings, by wipe-tinning. For this purpose we recommend the lead-free **FELDER Soft solder and tinning pastes** as well as our **Soldering oil „ST“**.

Delivery Form

8 - 10 kg blocks