



ISA-BRAZE® 970 Si



High-temperature solder & functional material

Features and Application Notes

ISA-BRAZE® 970 Si is a high-temperature solder and functional material based on the knowledge of precision alloys from Isabellenhütte – whereby we can offer special advantages in connection with the joining and coating of any steels, nickel alloys and hard metals. ISA-BRAZE® 970 Si is also ideal for difficult-to-wet alloys (e.g. chromium, molybdenum, tungsten). Due to the slightly elevated Si content, the flow and mold-filling behavior of the alloy is improved even further. The material is ideal for flux-free applications in inert gas due to the high melting interval. When used in atmosphere, the selection of the flux material based on DIN EN 1045 is to be made while taking into consideration the base materials to be soldered and the

soldering temperature. Typical application areas are in the tool and automotive industries. Special feature: In addition to the mechanical properties, electrophysical characteristic values can also be provided in consultation.

Type of delivery

ISA-BRAZE® 970 Si is delivered in the form of wires and rods in the dimension range of 0.5 to 3.0 mm Ø. It is also deliverable in the form of rings, punched and bent parts, flat wires and strips.

Designation	ISA-BRAZE® 970 Si
Standard	
ISO 3677	B-Cu86MnNi(Si)-970/1000
Composition [weight-%]	Cu remainder; Mn 12; Ni 2; Si 0.2
Max. permissible impurities [weight-%]	Al 0.001; Bi 0.03; Cd 0.01; P 0.008; Pb 0.025
Max. total impurities [weight-%]	0.15
Technical data	
Melting range	approx. 970 - 1,000 °C
Working temperature	approx. 990 °C
Density	approx. 8.4 g/cm ³
Shear strength according to DIN EN 12797	200 - 300 MPa (hard metal/steel)
Operating temperature of the solder point	max. 300 °C (without decrease in strength)

YOU DETERMINE THE FORM OF DELIVERY!

