

Zirconium Alloy Z-64Zr-Active

AUFHAUSER Zirconium Alloy Z-64Zr-Active is a low-temperature brazing alloy designed for brazing titanium alloys, titanium aluminides, niobium, refractory metals, ceramics, graphite, carbon-carbon composites, titanium to copper, and titanium to nickel-plated stainless steel.

APPLICATIONS

Heat exchangers, fuel pipelines, medical instruments or implants, honeycomb panels, fuel cells, compressor rotors, electronic devices.

NOMINAL COMPOSITION, wt. %

Ti	14 - 16
Ni	12 - 14
Cu	6.5 - 7.5
Hf	0.1 - 1.5
O	< 6000 ppm (<0.6%)
N	< 50 ppm (<0.005%)
Zr	remainder



PHYSICAL PROPERTIES

Liquidus temperature	786°C (1447°F)
Solidus temperature	772°C (1422°F)
Brazing temperature for joining titanium or niobium	820 - 840°C (1508 - 1544°F)
Brazing temperature for joining ceramics, graphite, and carbon composites	> 860°C (1580°F)
Brazing conditions	Vacuum 10 ⁻⁴ torr or better
Density	6.76 g/cm ³ (0.24 lb/in ³)
Coefficient of thermal expansion	8.8 x 10 ⁻⁶ m/[m·°C ⁻¹] (4.9 x 10 ⁻⁶ in/[in·°F ⁻¹])