

Bonding & Interconnect Materials

Wire and ribbon bonding | solders and die attach | semiconductor packaging

	Gold wire Fine ball bonds, die-to-package interconnects. Ball bond soft Au pads; heat + ultrasonic	Au (99.99%+)
	Aluminum wire Wedge bonds on dies, PCBs and ceramic carriers. Wedge bond pad metallurgy must qualify	Al, Al-1%Si
	Copper wire High-volume fine-wire interconnects; lower metal cost. Ball / wedge oxide + pad damage control	Cu
	Pd-coated Cu wire Oxidation-resistant Cu wire for ball bonding. Ball bond inert forming gas often needed	PCC / PdCu
	Gold ribbon Low-loop-height RF, microwave and power links. Thermosonic / wedge ribbon bonding	Au ribbon
	Aluminum ribbon High-current power die, bus and module links. Ultrasonic wedge / ribbon bonding	Al ribbon
	Gold-tin eutectic Hermetic optical and high-reliability die attach. Eutectic solder melt ~280°C	Au80Sn20
	SAC305 solder Lead-free assembly, bumps, connectors, attach. Reflow melt range ~217-220°C	Sn96.5Ag3Cu0.5
	Indium / In alloys Compliant interconnects, cryogenic and low-T attach. Pure In melts ~157°C creep caution	In; In-based
	Sintered silver High-power die attach; high-temperature service. Pressure/pressureless process; supplier-dependent	Ag paste / film

FAST SELECTION: Fine ball: Au / Cu / PCC | Wedge: Al / ribbon | Hermetic: AuSn | Power: Ag sinter

Illustrative component graphics. Bondability depends on finish, tool, process, cleanliness and qualification.