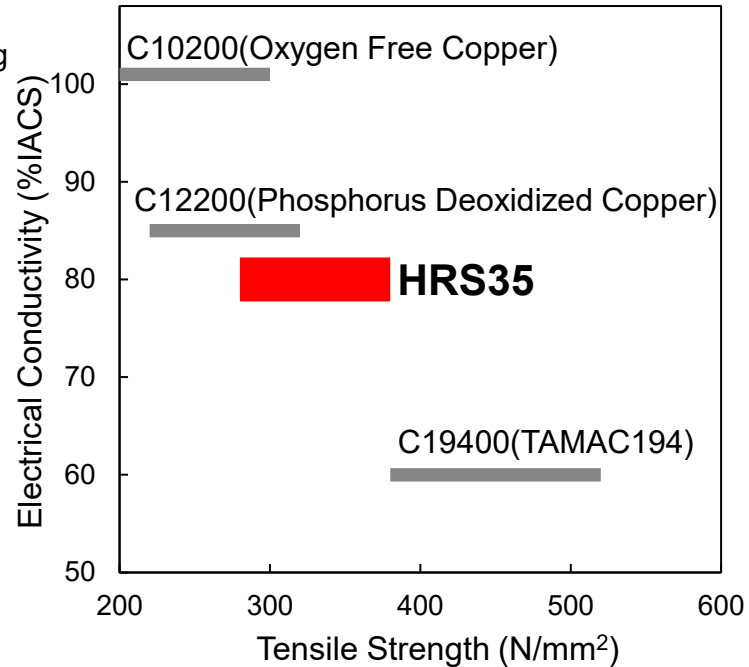


Products Information

Features

- Maintains high strength even after high-temperature bonding processes such as brazing and diffusion bonding
- High thermal conductivity after high-temperature bonding contributing to excellent cooling performance
- Excellent wettability in brazing enabling stable bonding quality
- Fine and stable microstructure after high-temperature bonding with suppressed grain coarsening
- Applicable for high-temperature bonding applications in high-performance thermal management components such as heat sinks, cold plates, and vapor chambers

Positioning of Alloy



Chemical composition (mass%)

Sn	Co	Zn	Ni	P	Cu
0.13	0.27	0.02	0.05	0.08	Rem. *

* Including inevitable impurities and trace additive elements

Physical properties

Property	Representative Value
Specific Gravity (293 K)	8.9
Coefficient of Thermal Expansion (/K: 293~573 K)	17.7×10 ⁻⁶
Thermal Conductivity (W/(m·K): 293 K)	325
Volume Resistivity (μΩm: 293 K)	0.022
Electrical Conductivity (%IACS: 293 K)	77
Modulus of Elasticity (kN/mm ² : 293 K)	1.2×10 ²

Mechanical properties

Higher strength grades exceeding this specification are available upon request. Please contact us for details.

	Temper		Typical Values	
	O	1/4H	O t:1.0mm	1/4H t:3.0mm
Tensile Strength (N/mm ²)	280 Min.	280-380	310	320
Elongation (%)	20 Min.	20 Min.	35	35
Vickers Hardness ^{*1} (HV)	(60-90)	(75-120)	75	95

*1 Reference value

Products Information

➤ Brazability

- ☐ Suppressed grain coarsening after brazing heat treatment and superior thermal stability compared to C12200

Brazing condition: 800°C for 10 min
(equivalent to furnace brazing)

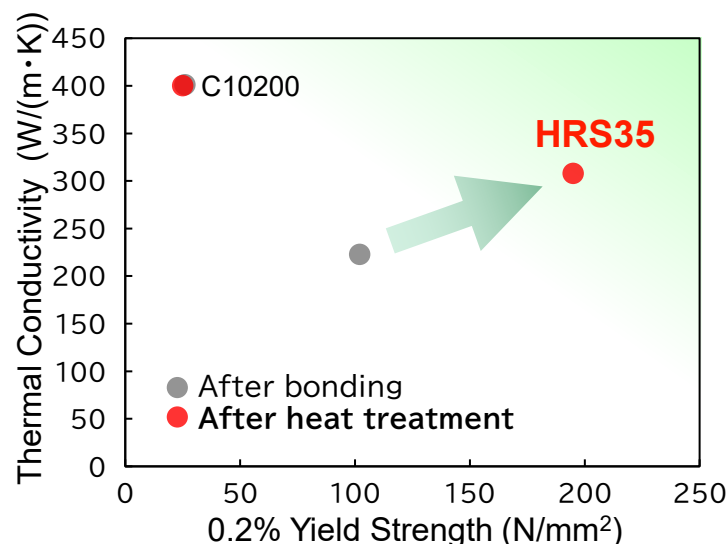
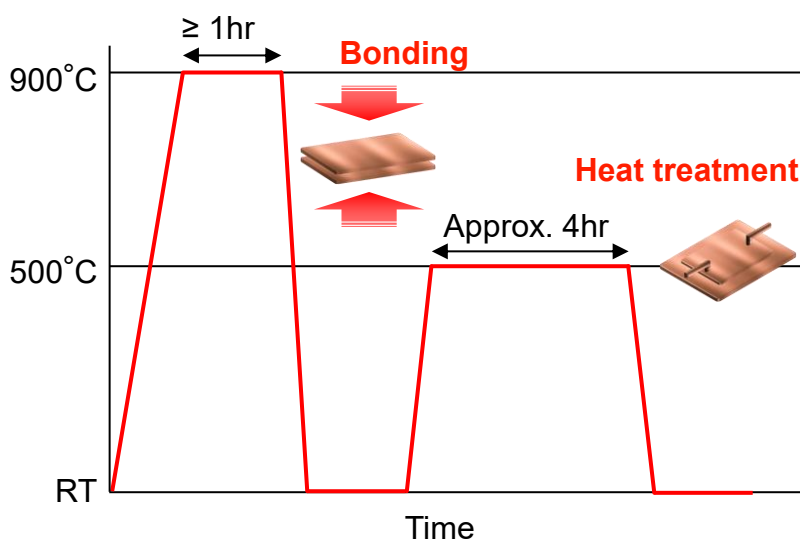
	Microstructure	0.2% Yield Strength (N/mm ²)
(1) C12200	Coarse	22
(2) HRS35	Fine	105



Filler metal:BCuP2

➤ Properties after Brazing and Heat Treatment

- ☐ After high-temperature processes such as brazing, subsequent cooling and heat treatment enable HRS35 to exhibit both high strength and high thermal conductivity



		0.2% Yield Strength (N/mm ²)	Thermal Conductivity (W/(m·K))
C10200	After bonding	26	401
	After heat treatment	25	400
HRS35	After bonding	102	223
	After heat treatment	195	308