Heat-resistant & Corrosion-resistant Alloys

Toshiba Materials has developed nickel-based and iron-based alloys for heat-resistant, corrosion-resistant materials. We have accumulated experience in applying them to extremely wide fields ranging from the semiconductor industry to the nuclear power industry. In order to meet a multiplicity of requirements such as corrosion resistance, high-temperature corrosion resistance and mechanical strength, we have a variety of metals and alloys.

Standard Specification

Product name	Composition [wt%]	Tensile strength [N/mm²]	Yield strength [N/mm²]	Elongation [%]	Features	Applications
ICL-C	Cr 16, Fe 7.5, Ni+Co Bal.	667	265	40	(Equivalent to Inconnel 600)	Semiconductor-manufacturing facilities, Nuclear plant equipment, Furnace fittings
ICS	Cr 19, Mo 3, Nb 5.2, Fe 18, Ti 1, Ni Bal.	1,393 (650℃ 1,098)	1,128 (941)	20 (20)	Suitable properties to be used for springs at high temperature (Equivalent to Inconnel 718)	Bellows, Nuclear plant equipment, Automobiles
ICX	Cr 15, Fe 7, Ti 2.5, Nb 0.8, Ni Bal.	1,167	706	25	(Equivalent to Inconnel X-750)	Nuclear plant equipment, Furnace fittings
KCF	Cr 20, Al 3, Fe Bal.	539	412	25	Oxidation resistant	Brazing jigs, Guide pins for projection welding
CAN	Cr 38, Al 3.8, Ni Bal.	1,765 (after aging)	—	—	High hardness(Hv 680)	Metallic dies