# The current version of this database covers 11 elements:

Cu B C Cr Fe Ni P Si Sn Ti Zn

This database has been developed for thermodynamic calculations of Cu-based alloys by Tohoku University, Japan. This database includes most of the elements used in commercial copper alloy systems and covers most of the phases appearing in commercial Cu-based alloys.

This database covers 11 elements under the following conditions: 1) All binaries are assessed; 2) Cu-Cr-Fe-Ni-P-Si-Sn-Zn are assessed for Cu-X-Y; 3) Some Cu-Ti-X (Cr, Si, Zn), Cu-B-X (Ni, Si) and Cu-C-X (Cr, Fe, Ni, Si) can be calculated, while the others have not been assessed.
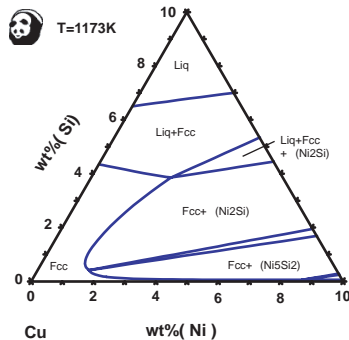
Isothermal section of Cu-Ni-Si at 1173K
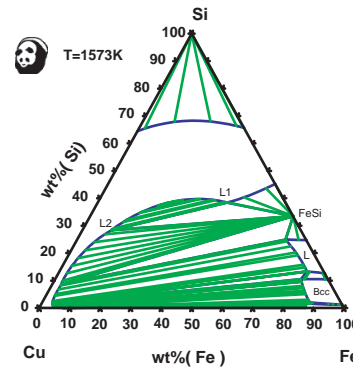
Isothermal section of Cu-Fe-Si at 1573K

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There are 4 other subsystems for the Cu-database. We can provide these databases separately.

Subsystem-A : critically assessed binary system, **Cu-X**
(Ag, Al, Au, B, Be, Bi, C, Co, Cr, Fe, In, Li, Mg, Mn, Mo, Nb, Ni, P, Pb, Sb, Si, Sn, Ti, Tl, V, Y, Zn, Zr)

Subsystem-B : critically assessed ternary system, **Cu-Fe-X**
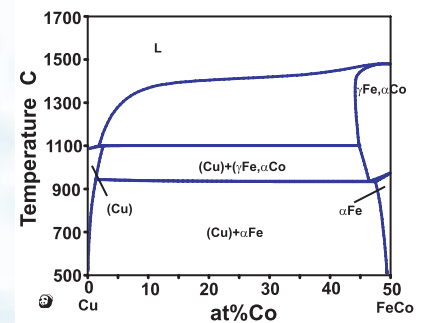(Al, C, Co, Cr, Mn, Mo, Nb, Ni, P, Si, Sn, V, Zn)

Subsystem-C : critically assessed ternary system, **Cu-Ni-X**
(Ag, B, Be, Co, Cr, Fe, Mn, P, Pb, Si, Sn, Ti, Zn)

Subsystem-D : critically assessed ternary system, **Cu-Cr-X**
(C, Fe, Nb, Ni, P, Si, Sn, Ti, Zr)

Applications: Cu-based alloy design and engineering.

Isopleth diagram of Cu-FeCo