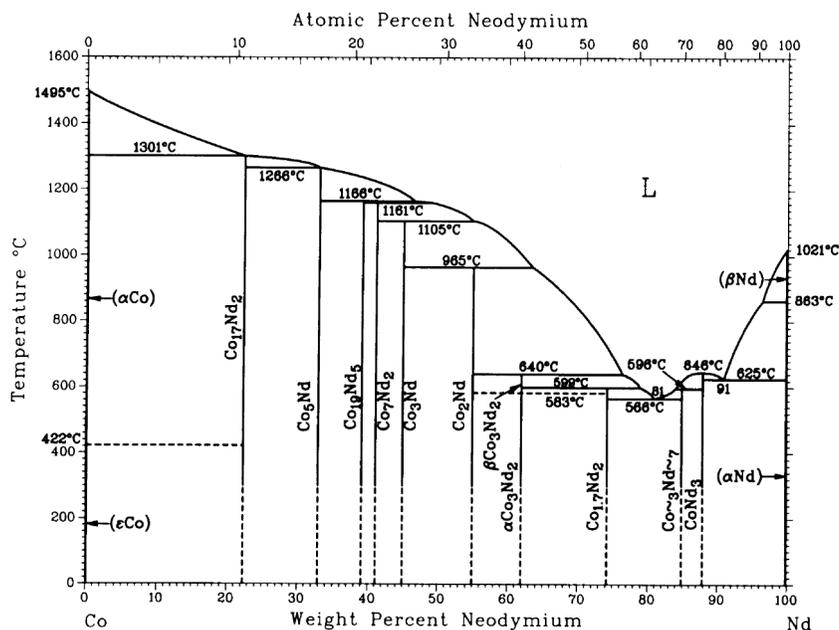


Co-Nd (Cobalt-Neodymium)

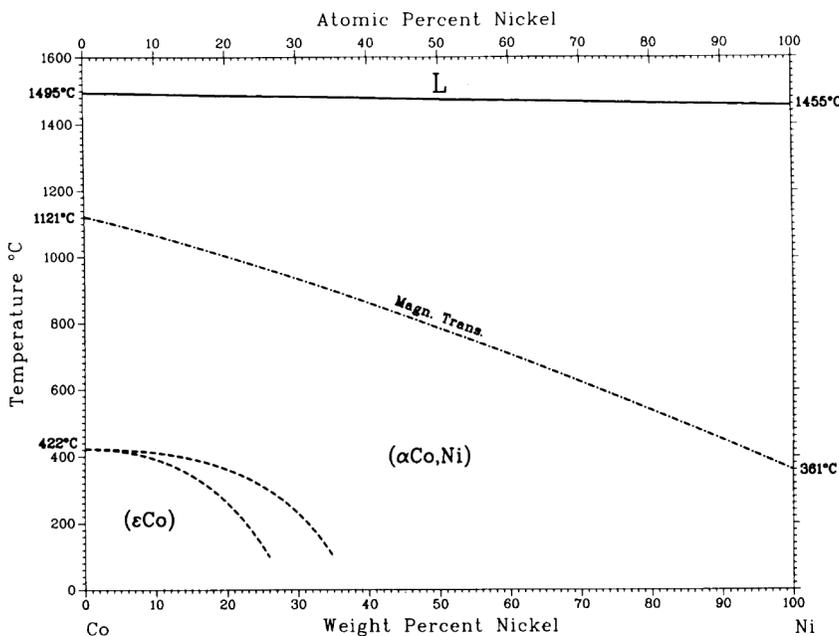


Co-Nd crystallographic data

Phase	Composition, wt% Nd	Pearson symbol	Space group	Prototype
(α Co)	~0	<i>cF4</i>	<i>Fm$\bar{3}m$</i>	Cu
(ϵ Co)	~0	<i>hP2</i>	<i>P6$_3$/mmc</i>	Mg
Co ₁₇ Nd ₂	~22.3	<i>hR19</i>	<i>R$\bar{3}m$</i>	Th ₂ Zn ₁₇
Co ₅ Nd	~32.9	<i>hP6</i>	<i>P6/mmm</i>	CaCu ₅
Co ₁₉ Nd ₅	~39.1	<i>hR24</i>	<i>R$\bar{3}m$</i>	Co ₁₉ Ce ₅
β Co ₇ Nd ₂	~41.1	<i>hR18</i>	<i>R$\bar{3}m$</i>	...
α Co ₇ Nd ₂	~41.1	<i>hP36</i>	<i>P6$_3$/mmc</i>	...
Co ₃ Nd	45	<i>hR12</i>	<i>R$\bar{3}m$</i>	Be ₃ Nb
Co ₂ Nd	55.0	<i>cF24</i>	<i>Fd$\bar{3}m$</i>	Cu ₂ Mg
Co ₃ Nd ₂	62	<i>o**</i>
Co _{1.7} Nd ₂	~74.3	<i>h**</i>
Co _{~3} Nd _{~7}	~85	<i>hP20</i>	<i>P6$_3$mc</i>	Fe ₃ Th ₇
CoNd ₃	88	<i>oP16</i>	<i>Pnma</i>	Fe ₃ C
(β Nd)	~100	<i>cI2</i>	<i>Im$\bar{3}m$</i>	W
(α Nd)	~100	<i>hP4</i>	<i>P6$_3$/mmc</i>	α La

A.E. Ray, *Cobalt*, 1974, No. 1, p 3–20

Co-Ni (Cobalt-Nickel)

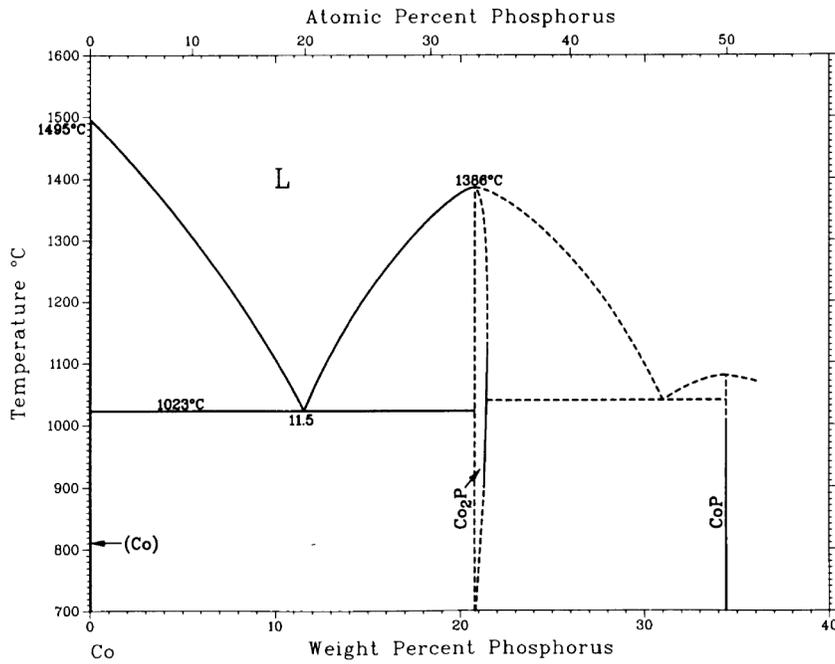


Co-Ni crystallographic data

Phase	Composition, wt% Ni	Pearson symbol	Space group	Prototype
(α Co,Ni)	0 to 100	<i>cF4</i>	<i>Fm$\bar{3}m$</i>	Cu
(ϵ Co)	0 to 35	<i>hP2</i>	<i>P6$_3$/mmc</i>	Mg

T. Nishizawa and K. Ishida, *Bull. Alloy Phase Diagrams*, Vol 4 (No. 4), 1983, p 390–395

Co-P (Cobalt-Phosphorus)



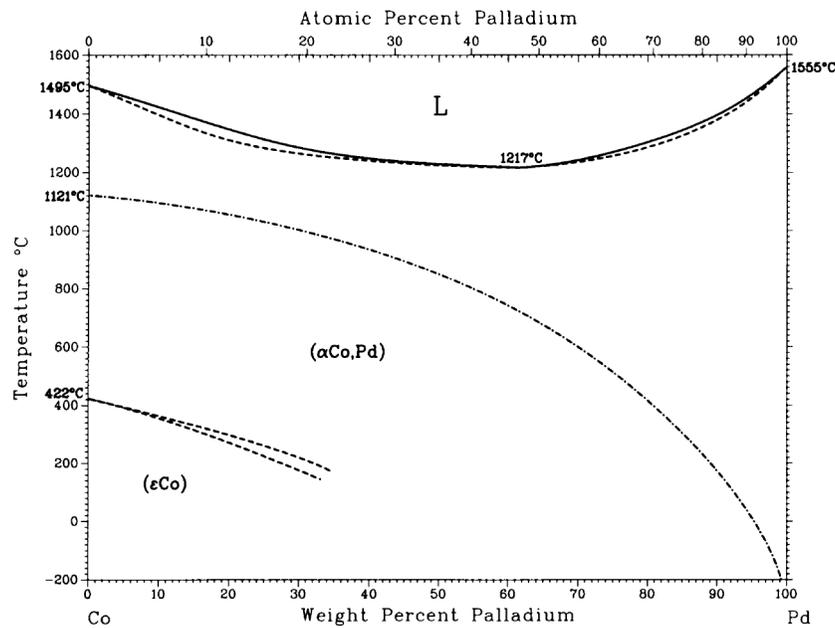
Co-P crystallographic data

Phase	Composition, wt% P	Pearson symbol	Space group	Prototype
(α Co)	~0	<i>cF4</i>	<i>Fm</i> $\bar{3}$ <i>m</i>	Cu
(ϵ Co)	~0	<i>hP2</i>	<i>P6</i> ₃ / <i>imm</i> <i>c</i>	Mg
Co ₂ P	~20.6 to 21.3	<i>oP12</i>	<i>Pnma</i>	Co ₂ Si
CoP	34.5	<i>oP8</i>	<i>Pnma</i>	MnP
CoP ₂	51.3	(a)	...	...
CoP ₃	61	<i>cI32</i>	<i>Im</i> $\bar{3}$ <i>m</i>	As ₃ Co
Red (P)	100	(b)	...	...
White (P)	100	(b)	...	...
Black (P)	100	<i>oC8</i>	<i>Cmca</i>	...

(a) Monoclinic. (b) Cubic

K. Ishida and T. Nishizawa, *Bull. Alloy Phase Diagrams*, Vol 11 (No. 6), 1991, p 555–560

Co-Pd (Cobalt-Palladium)

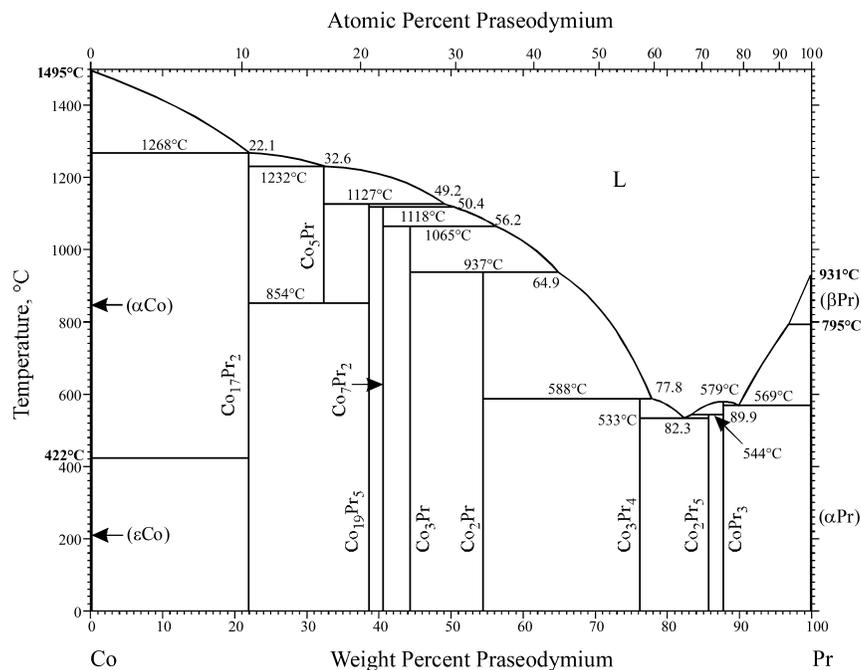


Co-Pd crystallographic data

Phase	Composition, wt% Pd	Pearson symbol	Space group	Prototype
(α Co,Pd)	0 to 100	<i>cF4</i>	<i>Fm</i> $\bar{3}$ <i>m</i>	Cu
(ϵ Co)	0 to ~31	<i>hR2</i>	<i>P6</i> ₃ / <i>imm</i> <i>c</i>	Mg

K. Ishida and T. Nishizawa, *J. Phase Equilib.*, Vol 12 (No. 1), 1991, p 83–87

Co-Pr (Cobalt-Praseodymium)

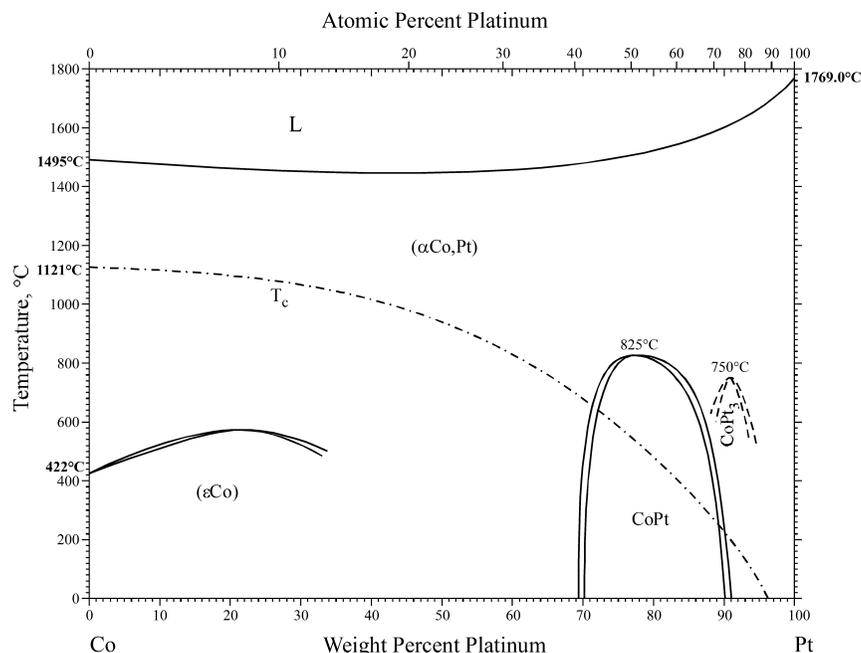


Co-Pr crystallographic data

Phase	Composition, wt% Pr	Pearson symbol	Space group	Prototype
(αCo)	0	<i>cF4</i>	<i>Fm</i> $\bar{3}$ <i>m</i>	Cu
(εCo)	0	<i>hP2</i>	<i>P6</i> $\bar{3}$ / <i>mmc</i>	Mg
Co ₁₇ Pr ₂	22.0	<i>hR19</i>	<i>R</i> $\bar{3}$ <i>m</i>	Th ₂ Zn ₁₇
Co ₅ Pr	32.3	<i>hP6</i>	<i>P6</i> / <i>mmm</i>	CaCu ₅
Co ₁₉ Pr ₅	38.6	<i>hR24</i>	<i>R</i> $\bar{3}$ <i>m</i>	Co ₁₉ Ce ₅
Co ₇ Pr ₂	40.6	<i>hR18</i>	<i>R</i> $\bar{3}$ <i>m</i>	...
	40.6	<i>hP36</i>	<i>P6</i> $\bar{3}$ / <i>mmc</i>	Ni ₇ Ce ₂
Co ₃ Pr	44.4	<i>hR12</i>	<i>R</i> $\bar{3}$ <i>m</i>	Be ₃ Nb
Co ₂ Pr	54.5	<i>cF24</i>	<i>Fd</i> $\bar{3}$ <i>m</i>	Cu ₂ Mg
Co ₃ Pr ₄	76.1	<i>hP14</i>	...	Co ₃ Nd ₄
Co ₂ Pr ₅	85.7	<i>mC28</i>	<i>C2</i> / <i>c</i>	Pd ₅ B ₂
CoPr ₃	87.8	<i>oP16</i>	<i>Pnma</i>	Fe ₃ C
(βPr)	100	<i>cI2</i>	<i>Im</i> $\bar{3}$ <i>m</i>	W
(αPr)	100	<i>hP4</i>	<i>P6</i> $\bar{3}$ / <i>mmc</i>	αLa

Z. Du, D. Wang, and W. Zhang, *J. Alloy Compd.*, Vol 284, 1999, p 206–212

Co-Pt (Cobalt-Platinum)

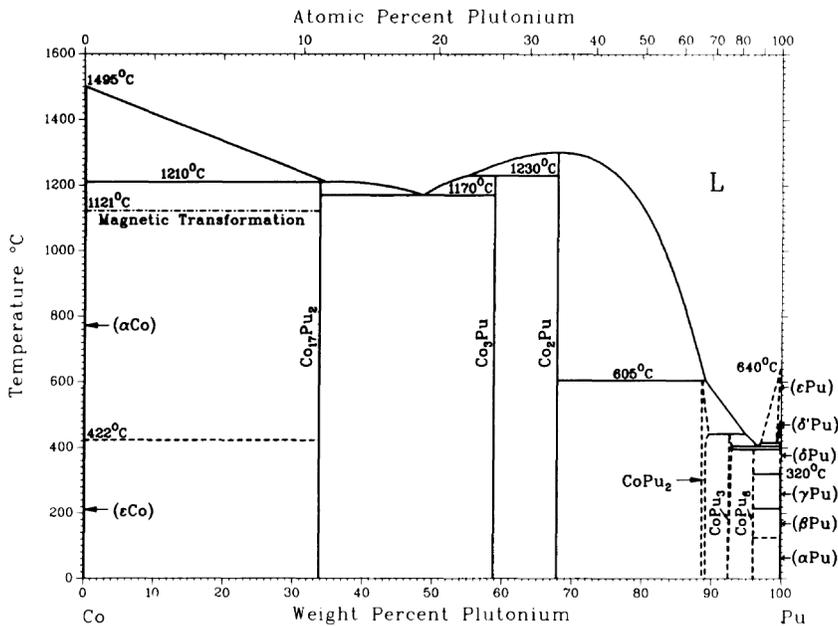


Co-Pt crystallographic data

Phase	Composition, wt% Pt	Pearson symbol	Space group	Prototype
(αCo,Pt)	0 to 100	<i>cF4</i>	<i>Fm</i> $\bar{3}$ <i>m</i>	Cu
(εCo)	0 to ?	<i>hP2</i>	<i>P6</i> $\bar{3}$ / <i>mmc</i>	Mg
CoPt	70 to 90	<i>tP4</i>	<i>P4</i> / <i>mmm</i>	AuCu
CoPt ₃	~91	<i>cP4</i>	<i>Pm</i> $\bar{3}$ <i>m</i>	AuCu ₃

H. Okamoto, *J. Phase Equilib.*, Vol 22 (No. 5), 2001, p 591

Co-Pu (Cobalt-Plutonium)

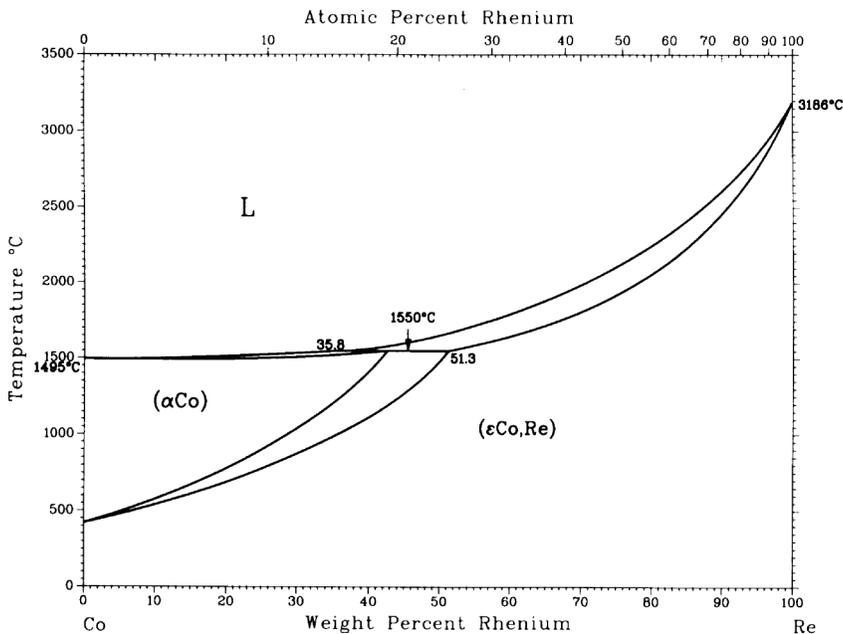


Co-Pu crystallographic data

Phase	Composition, wt% Pu	Pearson symbol	Space group	Prototype
(α Co)	~0	<i>cF4</i>	<i>Fm</i> $\bar{3}$ <i>m</i>	Cu
(ϵ Co)	~0	<i>hP2</i>	<i>P6</i> $\bar{3}$ / <i>mmc</i>	Mg
Co ₁₇ Pu ₂	34	<i>hP38</i>	<i>P6</i> $\bar{3}$ / <i>mmc</i>	Ni ₁₇ Th ₂
Co ₃ Pu	~58.9	<i>hR12</i>	<i>R</i> $\bar{3}$ <i>m</i>	Be ₃ Nb
Co ₂ Pu	~67.4	<i>cF24</i>	<i>Fd</i> $\bar{3}$ <i>m</i>	Cu ₂ Mg
CoPu ₂	~88.7 to 90	<i>hP9</i>	<i>P6</i> $\bar{3}$ / <i>mmc</i>	Fe ₂ P
CoPu ₃	~92.6 to 93	<i>oC16</i>	<i>Cmcm</i>	Re ₃ B
CoPu ₆	96.1	<i>tI28</i>	<i>I4/mcm</i>	MnU ₆
(ϵ Pu)	~99.5 to 100	<i>cI2</i>	<i>Im</i> $\bar{3}$ <i>m</i>	W
(δ' Pu)	~100	<i>tI2</i>	<i>I4/mmm</i>	In
(δ Pu)	~100	<i>cF4</i>	<i>Fm</i> $\bar{3}$ <i>m</i>	Cu
(γ Pu)	~100	<i>oF8</i>	<i>Fddd</i>	γ Pu
(β Pu)	~100	<i>mC34</i>	<i>C2/m</i>	β Pu
(α Pu)	~100	<i>mP16</i>	<i>P2</i> $\bar{1}$ / <i>m</i>	α Pu

D.M. Poole, M.G. Bale, P.G. Mardon, J.A.C. Marples, and J.L. Nichols, *Plutonium 1960*, Cleaver-Hume Press, London, 1961, p 267–280

Co-Re (Cobalt-Rhenium)

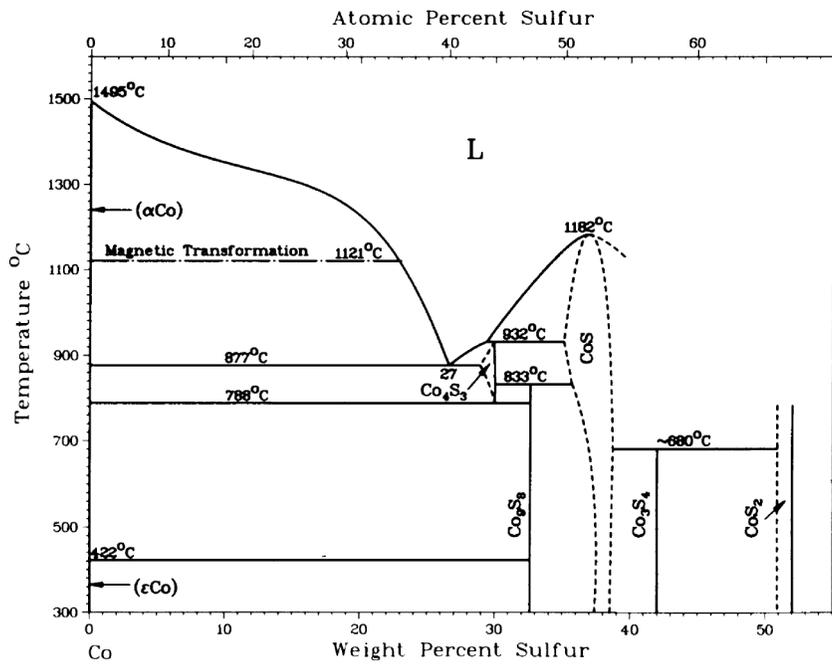


Co-Re crystallographic data

Phase	Composition, wt% Re	Pearson symbol	Space group	Prototype
(α Co)	0 to 43	<i>cF4</i>	<i>Fm</i> $\bar{3}$ <i>m</i>	Cu
(ϵ Co,Re)	0 to 100	<i>hP2</i>	<i>P6</i> $\bar{3}$ / <i>mmc</i>	Mg

Crystal Structures of Metals and Alloys, O.M. Barabash and Yu.N. Koval, Ed., Naukova Dumka, Kiev, 1986, p 241–242

Co-S (Cobalt-Sulfur)

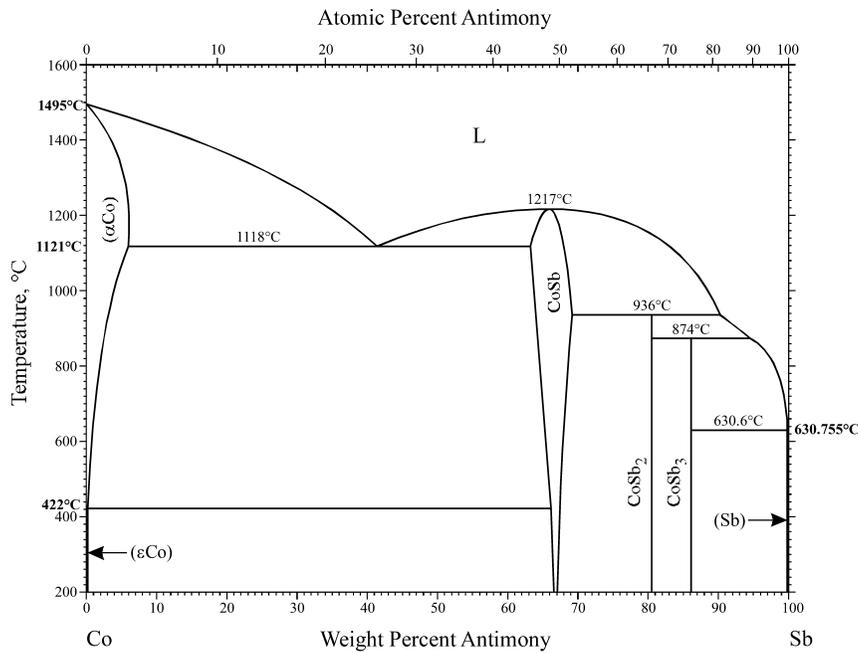


Co-S crystallographic data

Phase	Composition, wt% S	Pearson symbol	Space group	Prototype
(α Co)	0	<i>cF4</i>	<i>Fm</i> $\bar{3}$ <i>m</i>	Cu
(ϵ Co)	0	<i>hP2</i>	<i>P6</i> $_3$ / <i>mmc</i>	Mg
Co ₄ S ₃	~29.0	...	...	Maucherite
Co ₉ S ₈	32.6	<i>cF68</i>	<i>Fm</i> $\bar{3}$ <i>m</i>	Co ₉ S ₈
CoS	35.2 to 40	<i>hP4</i>	<i>P6</i> $_3$ / <i>mmc</i>	NiAs
Co ₃ S ₄	42.0	<i>cF56</i>	<i>Fd</i> $\bar{3}$ <i>m</i>	Co ₃ S ₄
CoS ₂	52.1	<i>cP12</i>	<i>Pa</i> $\bar{3}$	FeS ₂ (pyrite)
(S)	100	<i>oF128</i>	<i>Fddd</i>	...

Binary Alloy Phase Diagrams, 2nd ed., T.B. Massalski, H. Okamoto, P.R. Subramanian, and L. Kacprzak, Ed., ASM International, 1990, p 1232–1233

Co-Sb (Cobalt-Antimony)

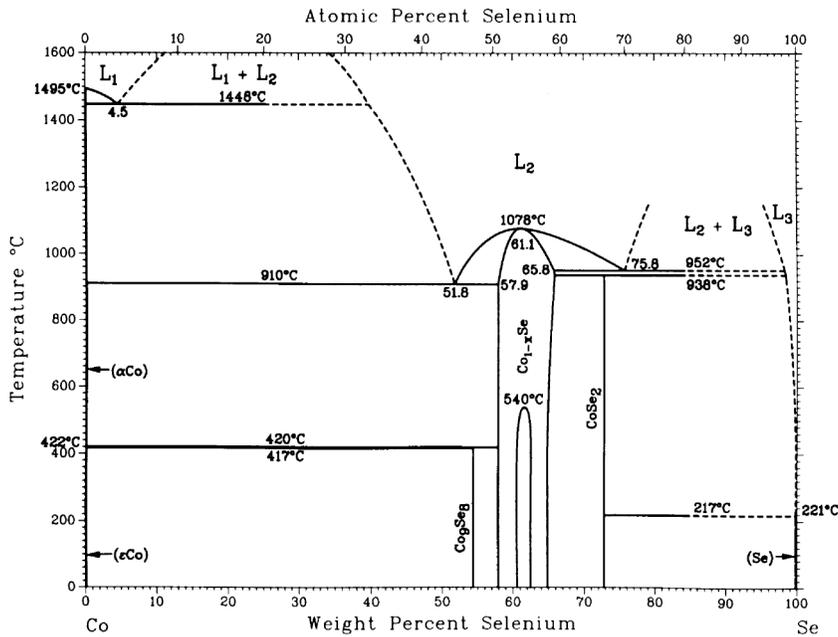


Co-Sb crystallographic data

Phase	Composition, wt% Sb	Pearson symbol	Space group	Prototype
(α Co)	0 to 6	<i>cF4</i>	<i>Fm</i> $\bar{3}$ <i>m</i>	Cu
(ϵ Co)	0	<i>hP2</i>	<i>P6</i> $_3$ / <i>mmc</i>	Mg
CoSb	63 to 69	<i>hP4</i>	<i>P6</i> $_3$ / <i>mmc</i>	NiAs
CoSb ₂	80.5	<i>oP6</i>	<i>Pnm</i> \bar{m}	FeS ₂ (marcasite)
CoSb ₃	86.1	<i>cI32</i>	<i>Im</i> $\bar{3}$	CoAs ₃
(Sb)	100	<i>hR2</i>	<i>R</i> $\bar{3}$ <i>m</i>	α As

H.X. Li, S.M. Hao, S.G. Fries, and J.C. Tedenac, *The 12th National Symposium on Phase Diagram, Materials, Design, and Their Applications*, China, 2004, p 81–83 (in Chinese)

Co-Se (Cobalt-Selenium)

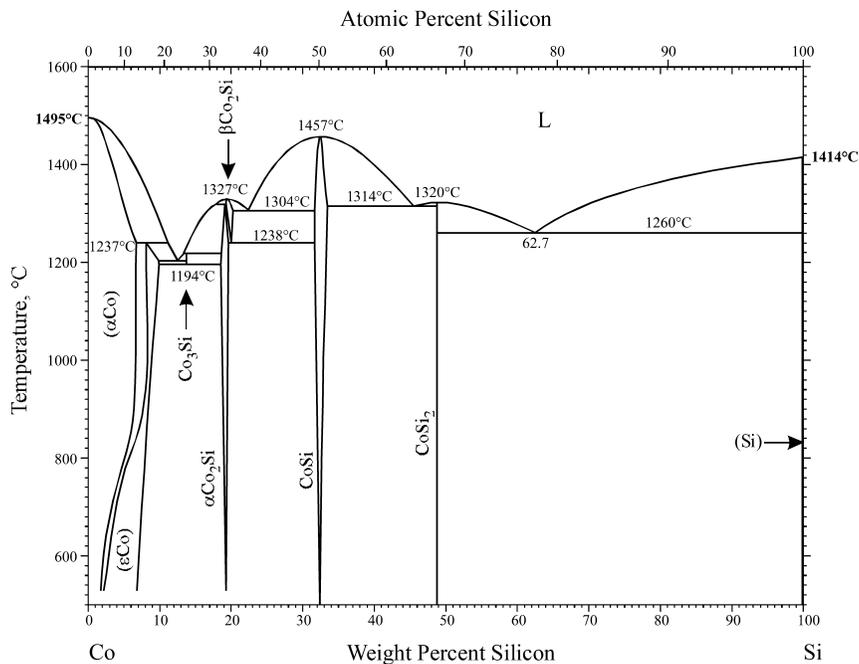


Co-Se crystallographic data

Phase	Composition, wt% Se	Pearson symbol	Space group	Prototype
(α Co)	0	<i>cF4</i>	<i>Fm</i> $\bar{3}$ <i>m</i>	Cu
(ϵ Co)	0	<i>hP2</i>	<i>P6</i> $_3$ / <i>mmc</i>	Mg
Co ₉ Se ₈	54.4	<i>cF68</i>	<i>Fm</i> $\bar{3}$ <i>m</i>	Co ₉ Se ₈
Co _{1-x} Se	57.9 to 65.8	<i>m</i> **	...	NiAs
CoSe ₂	72.9	<i>cP12</i>	<i>Pa</i> $\bar{3}$	FeS ₂ (pyrite)
(Se)	100	<i>oC8</i>	<i>Cmca</i>	γ Se

Binary Alloy Phase Diagrams, 2nd ed., T.B. Massalski, H. Okamoto, P.R. Subramanian, and L. Kacprzak, Ed., ASM International, 1990, p 1235, 1237

Co-Si (Cobalt-Silicon)

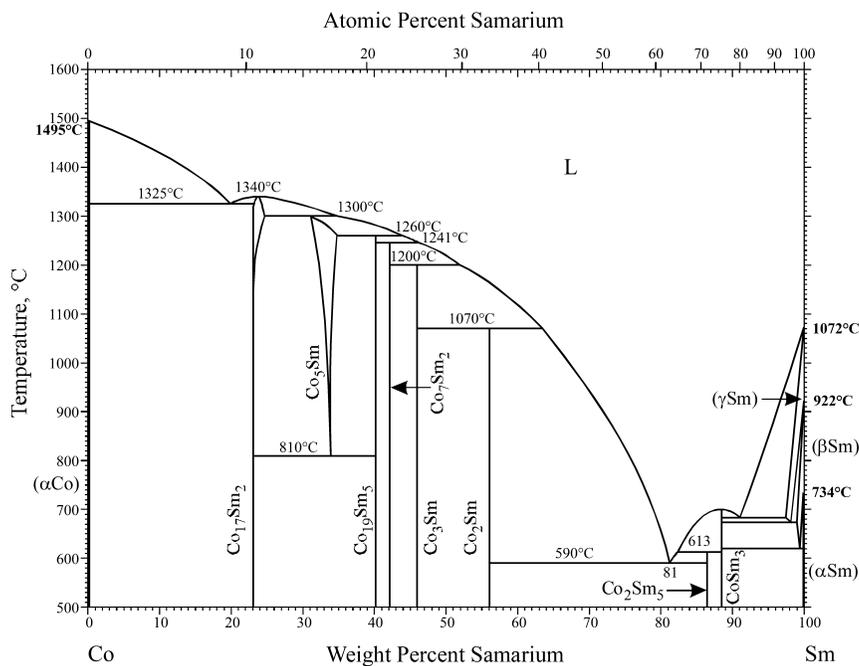


Co-Si crystallographic data

Phase	Composition, wt% Si	Pearson symbol	Space group	Prototype
(α Co)	0 to 6.7	<i>cF4</i>	<i>Fm</i> $\bar{3}$ <i>m</i>	Cu
(ϵ Co)	0 to 10	<i>hP2</i>	<i>P6</i> $_3$ / <i>mmc</i>	Mg
Co ₃ Si	13.7	<i>t</i>**	...	...
α Co ₂ Si	18.3 to 19.2	<i>oP12</i>	<i>Pnma</i>	Co ₂ Si
β Co ₂ Si	19 to 20	...	...	...
CoSi	31.4 to 33.6	<i>cF8</i>	<i>P2</i> $_1$ <i>3</i>	FeSi
CoSi ₂	48.8	<i>cF12</i>	<i>Fm</i> $\bar{3}$ <i>m</i>	CaF ₂
(Si)	100	<i>cF8</i>	<i>Fd</i> $\bar{3}$ <i>m</i>	C (diamond)

L. Zhang, Y. Du, H. Xu, and Z. Pan, *Calphad*, Vol 30 (No. 4), 2006, p 470–481

Co-Sm (Cobalt-Samarium)

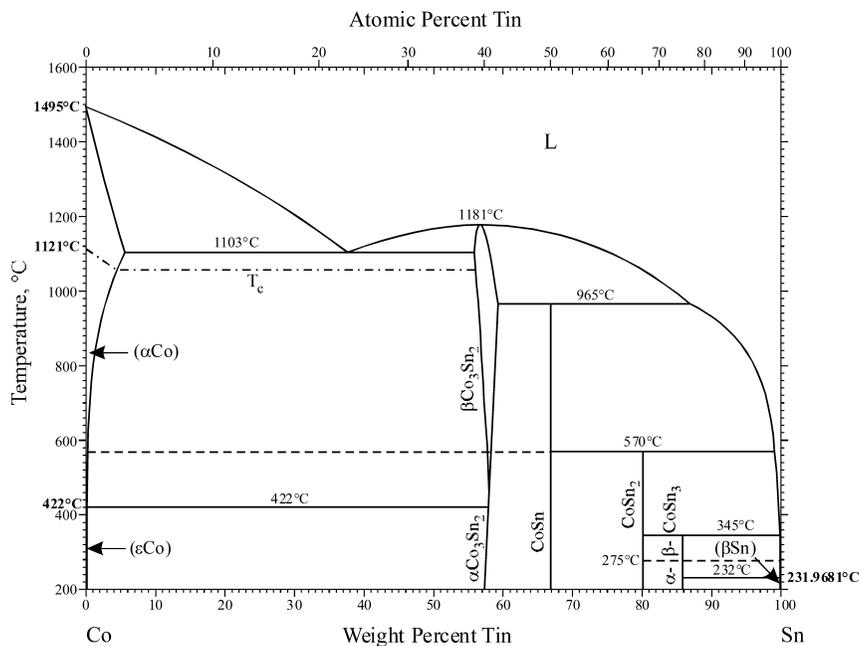


Co-Sm crystallographic data

Phase	Composition, wt% Sm	Pearson symbol	Space group	Prototype
(α Co)	0	<i>cF4</i>	<i>Fm</i> $\bar{3}$ <i>m</i>	Cu
Co ₁₇ Sm ₂	23.1 to 24.9	<i>hR19</i>	<i>R</i> $\bar{3}$ <i>m</i>	Th ₂ Zn ₁₇
Co ₅ Sm	31 to 34.8	<i>hP6</i>	<i>P6</i> / <i>mmm</i>	CaCu ₅
Co ₁₉ Sm ₅	40.2	<i>hR24</i>	<i>R</i> $\bar{3}$ <i>m</i>	Co ₁₉ Ce ₅
Co ₇ Sm ₂	42.2	<i>hR18</i>	<i>R</i> $\bar{3}$ <i>m</i>	...
Co ₃ Sm	56.1	<i>hR12</i>	<i>R</i> $\bar{3}$ <i>m</i>	Be ₃ Nb
Co ₂ Sm	56.1	<i>cF24</i>	<i>Fd</i> $\bar{3}$ <i>m</i>	Cu ₂ Mg
Co ₂ Sm ₅	86.4	<i>mC28</i>	<i>C2/c</i>	...
CoSm ₃	88.4	<i>oP16</i>	<i>Pnma</i>	Fe ₃ C
(γ Sm)	? to 100	<i>cI2</i>	<i>Im</i> $\bar{3}$ <i>m</i>	W
(β Sm)	? to 100	<i>hP2</i>	<i>P6</i> ₃ / <i>mmc</i>	Mg
(α Sm)	100	<i>hR3</i>	<i>R</i> $\bar{3}$ <i>m</i>	α Sm

H. Okamoto, *J. Phase Equilib. Diff.*, Vol 32 (No. 2), 2011, p 165–166

Co-Sn (Cobalt-Tin)

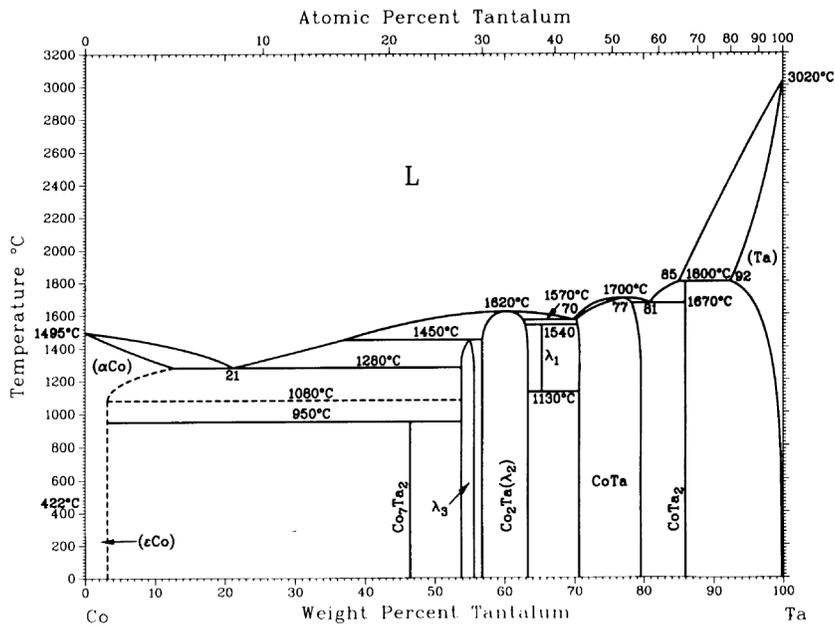


Co-Sn crystallographic data

Phase	Composition, wt% Sn	Pearson symbol	Space group	Prototype
(α Co)	0 to 6	<i>cF4</i>	<i>Fm</i> $\bar{3}$ <i>m</i>	Cu
(ϵ Co)	0	<i>hP2</i>	<i>P6</i> ₃ / <i>mmc</i>	Mg
β Co ₃ Sn ₂	54 to 59	<i>hP4</i>	<i>P6</i> ₃ / <i>mmc</i>	NiAs
α Co ₃ Sn ₂	57.3 to 58	<i>oP20</i>	<i>Pnma</i>	Ni ₃ Sn ₂
CoSn	66.8	<i>hP6</i>	<i>P6</i> / <i>mmm</i>	CoSn
CoSn ₂	80.1	<i>tI12</i>	<i>I4</i> / <i>mcm</i>	Al ₂ Cu
β CoSn ₃	85.8	<i>tI16</i>	<i>I4</i> ₁ / <i>acd</i>	...
α CoSn ₃	85.8	<i>oC32</i>	<i>Cmca</i>	PdSn ₃
(β Sn)	100	<i>tI4</i>	<i>I4</i> ₁ / <i>amd</i>	β Sn

M. Jiang, J. Sato, I. Ohnuma, R. Kainuma, and K. Ishida, *Calphad*, Vol 28, 2004, p 213–220

Co-Ta (Cobalt-Tantalum)



Co-Ta crystallographic data

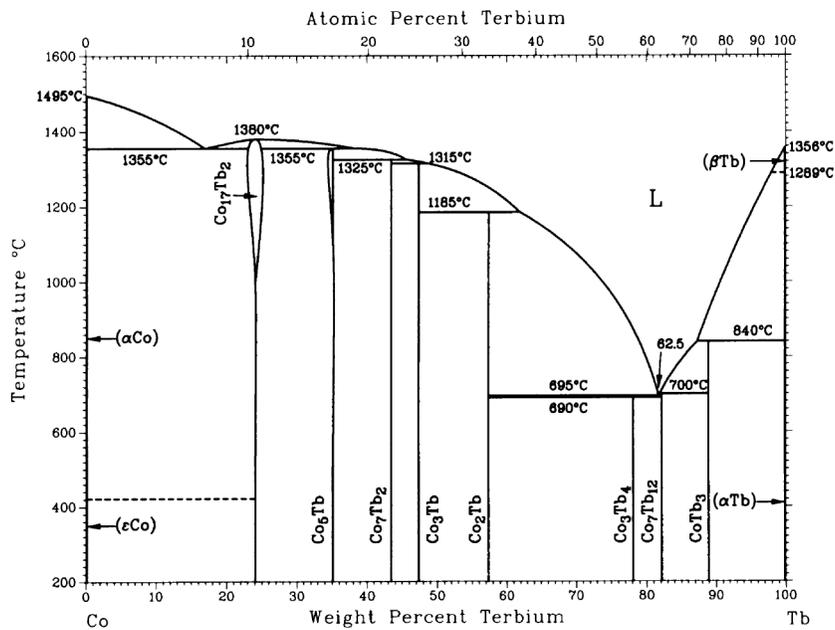
Phase	Composition, wt% Ta	Pearson symbol	Space group	Prototype
(α Co)	0 to 11	<i>cF4</i>	<i>Fm</i> $\bar{3}$ <i>m</i>	Cu
Co ₇ Ta ₂	46.7	...	...	...
λ_3	53.81 to 56	<i>hP24</i>	<i>P6</i> ₃ / <i>mmc</i>	MgNi ₂
λ_2	56.2 to 63	<i>cF24</i>	<i>Fd</i> $\bar{3}$ <i>m</i>	Cu ₂ Mg
λ_1	~64	<i>hP12</i>	<i>P6</i> ₃ / <i>mmc</i>	MgZn ₂
Co ₆ Ta ₇	71 to 80	<i>hR13</i>	<i>R</i> $\bar{3}$ <i>m</i>	Fe ₇ W ₆
CoTa ₂	86.0	<i>tI12</i>	<i>I4/mcm</i>	Al ₂ Cu
(Ta)	92 to 100	<i>cI2</i>	<i>Im</i> $\bar{3}$ <i>m</i>	W

H. Okamoto, *Binary Alloy Phase Diagrams Updating Service*, H. Okamoto, Ed., ASM International, 1991

See also

H. Okamoto, *J. Phase Equilib. Diff.*, Vol 25 (No. 6), 2004, p 571–572

Co-Tb (Cobalt-Terbium)

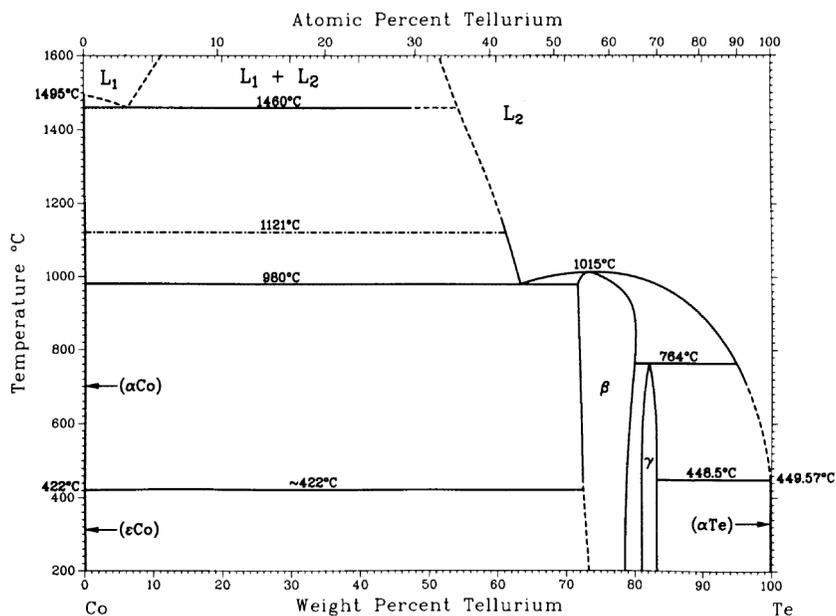


Co-Tb crystallographic data

Phase	Composition, wt% Tb	Pearson symbol	Space group	Prototype
(α Co)	0	<i>cF4</i>	<i>Fm</i> $\bar{3}$ <i>m</i>	Cu
(ϵ Co)	0	<i>hP2</i>	<i>P6</i> ₃ / <i>mmc</i>	Mg
Co ₁₇ Tb ₂	~24	<i>hP38</i>	<i>P6</i> ₃ / <i>mmc</i>	...
		<i>hR19</i>	<i>R</i> $\bar{3}$ <i>m</i>	Th ₂ Zn ₁₇
Co ₅ Tb	~35.1	<i>hP6</i>	<i>P6</i> / <i>mmm</i>	CaCu ₅
Co ₇ Tb ₂	43.5	<i>hR18</i>	<i>R</i> $\bar{3}$ <i>m</i>	Co ₇ Er ₂
Co ₃ Tb	47	<i>hR12</i>	<i>R</i> $\bar{3}$ <i>m</i>	Be ₃ Nb
Co ₂ Tb	57.4	<i>cF24</i>	<i>Fd</i> $\bar{3}$ <i>m</i>	Cu ₂ Mg
Co ₃ Tb ₄	78.2	<i>hP22</i>	<i>P6</i> ₃ / <i>m</i>	...
Co ₇ Tb ₁₂	82.2	<i>mP38</i>	<i>P2</i> ₁ / <i>c</i>	...
CoTb ₃	89	<i>oP16</i>	<i>Pnma</i>	Fe ₃ C
(β Tb)				
(α Tb)	100	<i>hP2</i>	<i>P6</i> ₃ / <i>mmc</i>	Mg

Binary Alloy Phase Diagrams, 2nd ed., T.B. Massalski, H. Okamoto, P.R. Subramanian, and L. Kacprzak, Ed., ASM International, 1990, p 1244, 1246

Co-Te (Cobalt-Tellurium)

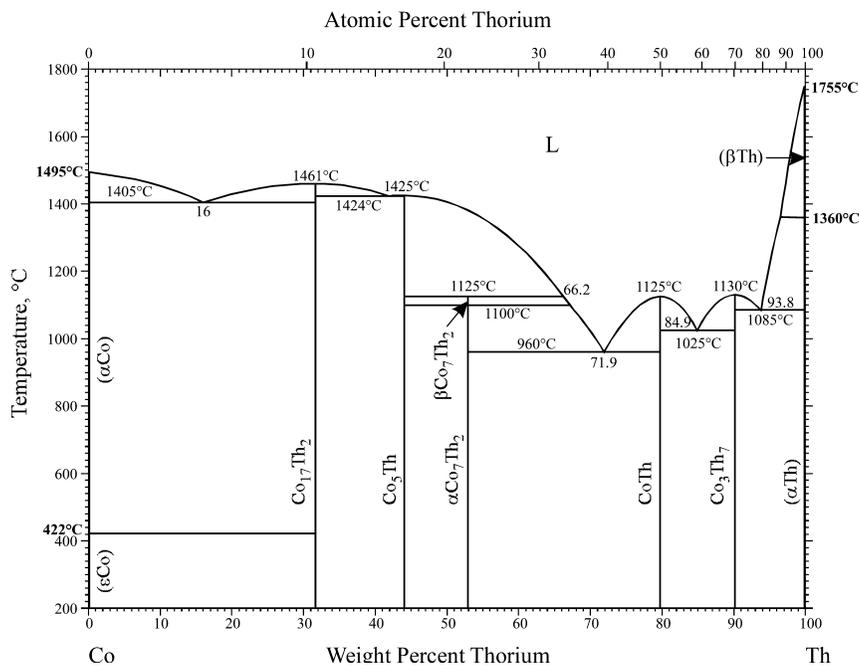


Co-Te crystallographic data

Phase	Composition, wt% Te	Pearson symbol	Space group	Prototype
(α Co)	~0	<i>cF4</i>	<i>Fm</i> $\bar{3}$ <i>m</i>	Cu
(ϵ Co)	~0	<i>hP2</i>	<i>P6</i> $\bar{3}$ / <i>mmc</i>	Mg
β (Co ₂ Te ₃)	73 to 80	<i>hP4</i>	<i>P6</i> $\bar{3}$ / <i>mmc</i>	AsNi
γ (CoTe ₂)	81.1 to 83.3	<i>oP6</i>	<i>Pnn</i> 2	FeS ₂
(α Te)	~100	<i>hP3</i>	<i>P3</i> $\bar{1}$ 21	Se

K. Ishida and T. Nishizawa, *Binary Alloy Phase Diagrams*, 2nd ed., T.B. Massalski, H. Okamoto, P.R. Subramanian, and L. Kacprzak, Ed., ASM International, 1990, p 1247–1248

Co-Th (Cobalt-Thorium)

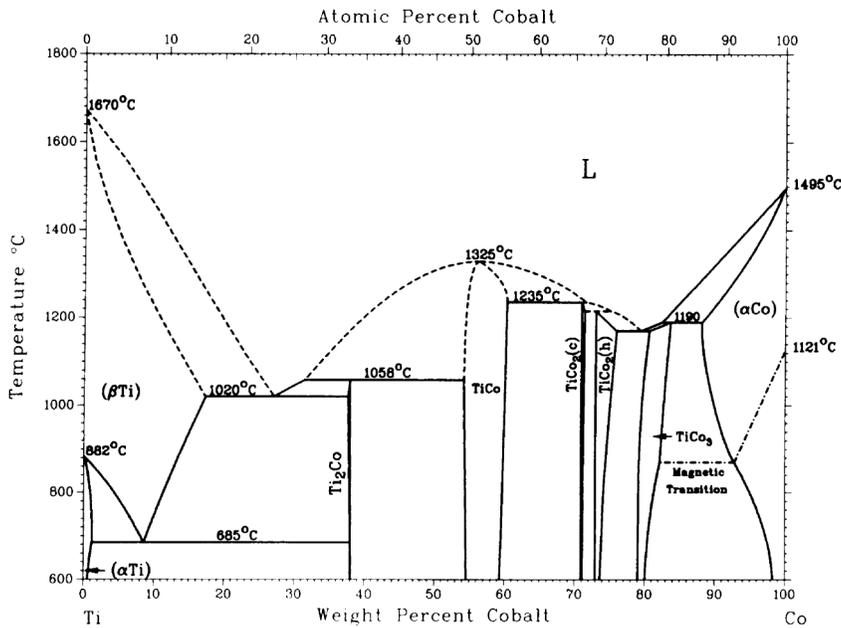


Co-Th crystallographic data

Phase	Composition, wt% Th	Pearson symbol	Space group	Prototype
(α Co)	0	<i>cF4</i>	<i>Fm</i> $\bar{3}$ <i>m</i>	Cu
(ϵ Co)	0	<i>hP2</i>	<i>P6</i> $\bar{3}$ / <i>mmc</i>	Mg
Co ₁₇ Th ₂	31.7	<i>hR</i> 19	<i>R</i> $\bar{3}$ <i>m</i>	Th ₂ Zn ₁₇
Co ₅ Th	44.1	<i>hP6</i>	<i>P6</i> / <i>mmm</i>	CaCu ₅
β Co ₇ Th ₂	52.9	<i>hR</i> 18	<i>R</i> $\bar{3}$ <i>m</i>	Co ₇ Er ₂
α Co ₇ Th ₂	52.9	<i>hP</i> 36	<i>P6</i> $\bar{3}$ / <i>mmc</i>	Ce ₂ Ni ₇
CoTh	79.7	<i>oC</i> 8	<i>Cmcm</i>	CrB
Co ₃ Th ₇	90.2	<i>hP</i> 20	<i>P6</i> $\bar{3}$ / <i>mc</i>	Fe ₃ Th ₇
(β Th)	100	<i>cI</i> 2	<i>Im</i> $\bar{3}$ <i>m</i>	W
(α Th)	100	<i>cF4</i>	<i>Fm</i> $\bar{3}$ <i>m</i>	Cu

C.P. Wang, P. Yu, X.J. Liu, I. Ohnuma, R. Kainuma, and K. Ishida, *J. Alloy Compd.*, Vol 457, 2008, p 150–156

Co-Ti (Cobalt-Titanium)



Co-Ti crystallographic data

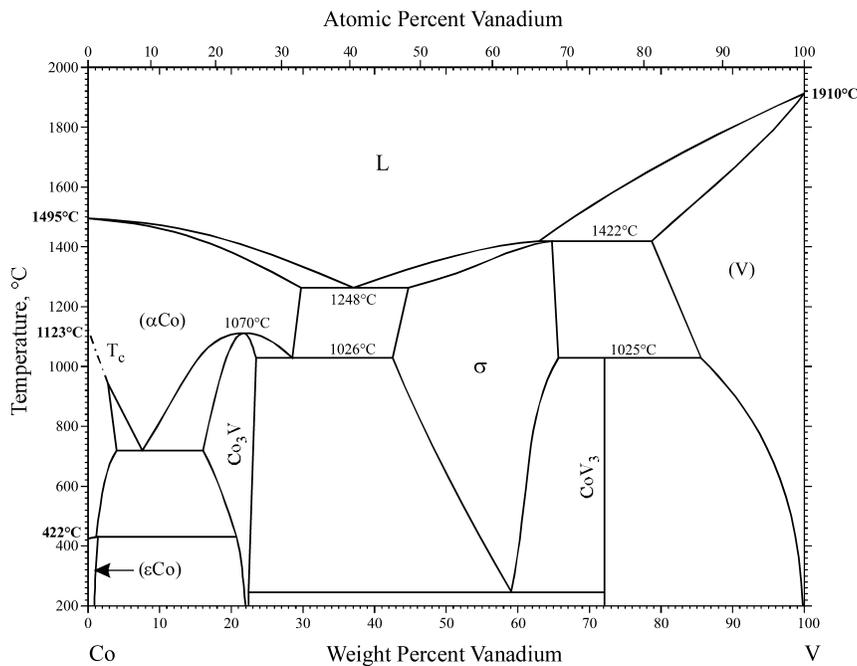
Phase	Composition, wt% Co	Pearson symbol	Space group	Prototype
(α Ti)	0 to 1.0	<i>hP2</i>	<i>P6₃/mmc</i>	Mg
(β Ti)	0 to 17.3	<i>cI2</i>	<i>Im$\bar{3}m$</i>	W
Ti ₂ Co	37.6 to 38.1	<i>cF96</i>	<i>Fd$\bar{3}m$</i>	...
TiCo	54 to 60	<i>cP2</i>	<i>Pm$\bar{3}m$</i>	CsCl
TiCo ₂ (cubic)	71.0 to 71	<i>cF24</i>	<i>Fd$\bar{3}m$</i>	Cu ₂ Mg
TiCo ₂ (hexagonal)	73.0 to 76	<i>hP24</i>	<i>P6₃/mmc</i>	MgNi ₂
TiCo ₃	79.1 to 83.7	<i>cP4</i>	<i>Pm$\bar{3}m$</i>	AuCu ₃
(ϵ Co)	~99.2 to 100	<i>hP2</i>	<i>P6₃/mmc</i>	Mg
(α Co)	88.0 to 100	<i>cF4</i>	<i>Fm$\bar{3}m$</i>	Cu

J.L. Murray, *Bull. Alloy Phase Diagrams*, Vol 3 (No. 1), 1982, p 74–85

See also

H. Okamoto, *J. Phase Equilib.*, Vol 22 (No. 5), 2001, p 592

Co-V (Cobalt-Vanadium)

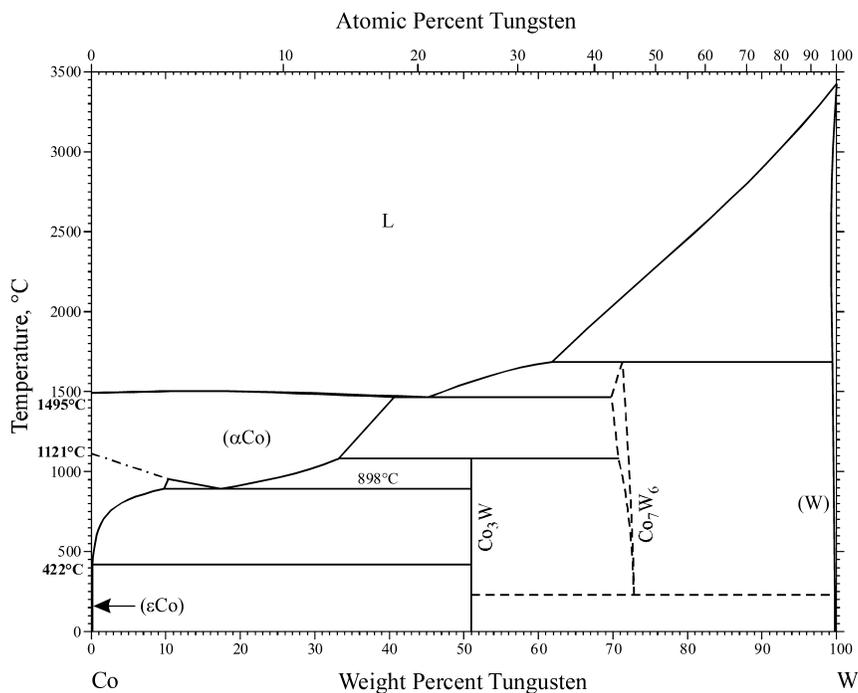


Co-V crystallographic data

Phase	Composition, wt% V	Pearson symbol	Space group	Prototype
(α Co)	0 to 30	<i>cF4</i>	<i>Fm$\bar{3}m$</i>	Cu
(ϵ Co)	0 to 1.7	<i>hP2</i>	<i>P6₃/mmc</i>	Mg
Co ₃ V	16 to 23	<i>hP24</i>	<i>P6m2</i>	...
σ	42 to 65	<i>tP30</i>	<i>P4₂/mmm</i>	σ CrFe
CoV ₃	72.2	<i>cP8</i>	<i>Pm$\bar{3}n$</i>	Cr ₃ Si
(V)	79 to 100	<i>cI2</i>	<i>Im$\bar{3}m$</i>	W

J. Bratberg and B. Sundman, *J. Phase Equilib.*, Vol 24 (No. 6), 2003, p 495–503

Co-W (Cobalt-Tungsten)

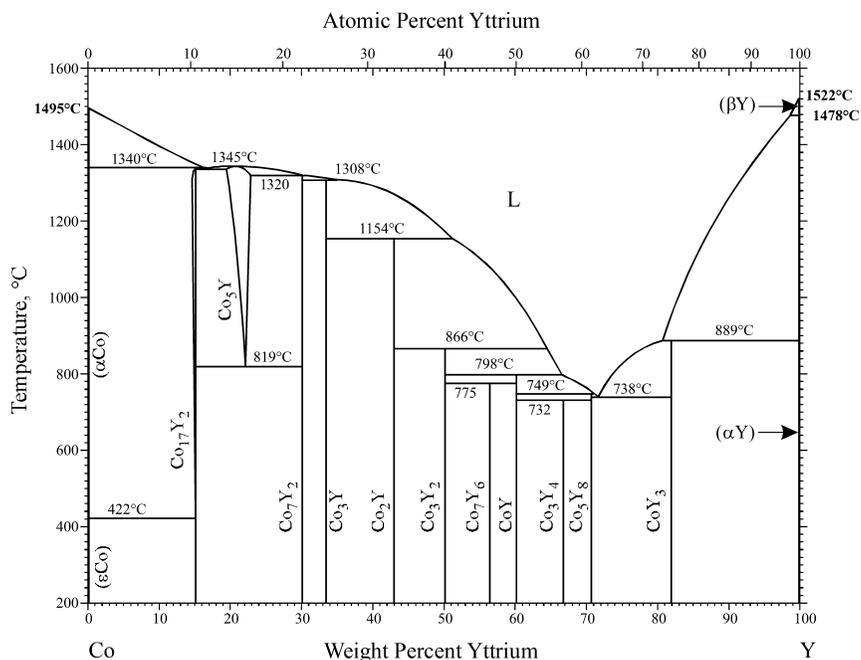


Co-W crystallographic data

Phase	Composition, wt% W	Pearson symbol	Space group	Prototype
(αCo)	0 to 41	<i>cF4</i>	<i>Fm</i> $\bar{3}$ <i>m</i>	Cu
(εCo)	0	<i>hP2</i>	<i>P6</i> ₃ / <i>mmc</i>	Mg
Co ₃ W	51.0	<i>hP8</i>	<i>P6</i> ₃ / <i>mmc</i>	Ni ₃ Sn
Co ₇ W ₆	70 to 73	<i>hR13</i>	<i>R</i> $\bar{3}$ <i>m</i>	Fe ₇ W ₆
(W)	99 to 100	<i>cI2</i>	<i>Im</i> $\bar{3}$ <i>m</i>	W

H. Okamoto, *J. Phase Equilib. Diff.*, Vol 29 (No. 1), 2008, p 119

Co-Y (Cobalt-Yttrium)



Co-Y crystallographic data

Phase	Composition, wt% Y	Pearson symbol	Space group	Prototype
(αCo)	0 to 0.14	<i>cF4</i>	<i>Fm</i> $\bar{3}$ <i>m</i>	Cu
(εCo)	0	<i>hP2</i>	<i>P6</i> ₃ / <i>mmc</i>	Mg
Co ₁₇ Y ₂	14.8 to 15.7	<i>hP38</i>	<i>P6</i> ₃ / <i>mmc</i>	Ni ₁₇ Th ₂
		<i>hR19</i>	<i>R</i> $\bar{3}$ <i>m</i>	Th ₂ Zn ₁₇
Co ₅ Y	19.5 to 22.8	<i>hP6</i>	<i>P6</i> / <i>mmm</i>	CaCu ₅
Co ₇ Y ₂	30.1	<i>hR18</i>	<i>R</i> $\bar{3}$ <i>m</i>	Co ₇ Er ₂
Co ₃ Y	33.5	<i>hR12</i>	<i>R</i> $\bar{3}$ <i>m</i>	Be ₃ Nb
		<i>hP24</i>	<i>P6</i> ₃ / <i>mmc</i>	CeNi ₃
Co ₂ Y	43.0	<i>cF24</i>	<i>Fd</i> $\bar{3}$ <i>m</i>	Cu ₂ Mg
Co ₃ Y ₂	50.1	<i>cP*</i>
Co ₇ Y ₆	56.4	...	...	...
CoY	60.1	<i>oC8</i>	<i>Cmcm</i>	CrB
Co ₃ Y ₄	66.8	<i>hP22</i>	<i>P6</i> ₃ / <i>m</i>	...
Co ₅ Y ₈	70.7	<i>mP52</i>	<i>P2</i> ₁ / <i>c</i>	...
CoY ₃	81.9	<i>oP16</i>	<i>Pnma</i>	Fe ₃ C
(βY)	100	<i>cI2</i>	<i>Im</i> $\bar{3}$ <i>m</i>	W
(αY)	100	<i>hP2</i>	<i>P6</i> ₃ / <i>mmc</i>	Mg

Z. Du and D. Lu, *J. Alloy Compd.*, Vol 373, 2004, p 171-178