



>>Entry Name: Cobalt silicides

CAS Registry Number: 11104-62-4

Molecular Formula: [CoSi]

General Statement: Phases in the Co-Si system

>>Variant: Cobalt silicide (CoSi)

CAS Registry Number: 12017-11-7

Molecular Formula: CoSi

Molecular Weight: 87.019

Accurate Mass: 86.910125

Percentage Composition: Co 67.72%; Si 32.28%

General Statement: FeSi-type struct.

Melting Point: Mp 1460°

>>Variant: Cobalt silicide (CoSi₂)

CAS Registry Number: 12017-12-8

Molecular Formula: CoSi₂

Molecular Weight: 115.104

Accurate Mass: 114.887052

Percentage Composition: Co 51.20%; Si 48.80%

General Statement: CaF₂-type struct.

Use/Importance: Often synth. as epitaxial films on Si for use in semiconductor devices

Melting Point: Mp 1336°

>>Variant: Cobalt silicide (Co₂Si)

CAS Registry Number: 12134-03-1

Molecular Formula: Co₂Si

Molecular Weight: 145.952

Accurate Mass: 145.843323

Percentage Composition: Co 80.76%; Si 19.24%

General Statement: Distorted Ni₂In-type struct.

Melting Point: Mp 1332°

References:

Bertaut, F. *et al.*, *C. R. Hebd. Seances Acad. Sci.*, 1950, **231**, 628-629, (*CoSi₂, synth, cryst struct*)

Geller, S. *et al.*, *Acta Cryst.*, 1955, **8**, 83-87, (*Co₂Si, cryst struct*)

Marshall, R.C., *J. Cryst. Growth*, 1968, **3-4**, 295-299, (*CoSi, cryst growth*)

Sidorenko, F. *et al.*, *CA*, 1969, **70**, 32395u, (*CoSi, cryst struct*)

Tung, R.T. *et al.*, *Mater. Res. Soc. Symp. Proc.*, 1982, **10**, 79-92, (*CoSi₂, rev, epitaxy*)

Ditchek, B.M., *J. Cryst. Growth*, 1984, **69**, 207-210, (*CoSi₂, cryst struct*)

Derrien, J. *et al.*, *J. Vac. Sci. Technol., A*, 1987, **5**, 2111-2120, (*CoSi₂, rev, use*)

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