

# cobalt

Other names:	cobalt element
Inchi:	InChI=1S/Co
InchiKey:	GUTLYIVDDKVIGB-UHFFFAOYSA-N
Formula:	Co
SMILES:	[Co]
Mol. weight [g/mol]:	58.93
CAS:	7440-48-4

## Physical Properties

Property code	Value	Unit	Source
affp	742.70	kJ/mol	NIST Webbook
basg	719.80	kJ/mol	NIST Webbook
ea	0.66 ± 0.00	eV	NIST Webbook
ea	0.66 ± 0.00	eV	NIST Webbook
ea	0.66 ± 0.01	eV	NIST Webbook
ie	7.88	eV	NIST Webbook
ie	7.86	eV	NIST Webbook
ie	7.86 ± 0.06	eV	NIST Webbook
ie	7.86	eV	NIST Webbook
ie	7.86	eV	NIST Webbook
ie	7.88	eV	NIST Webbook
ie	7.88	eV	NIST Webbook

## Correlations

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/(T + C)$
Coeff. A	1.83684e+01
Coeff. B	-4.25454e+04
Coeff. C	-1.06930e+02
Temperature range (K), min.	1790.15
Temperature range (K), max.	3198.15

# Sources

Thermodynamic excess quantities of ternary Au Co Pd melts by computer-aided K<sub>1</sub>H<sub>2</sub>O<sub>2</sub> gas analysis and Standard Molar Enthalpy of Formation of Ethylammonium Tetrachlorocobaltate(II) Chloride (Ln = Dy, Ho) by solid-state electrochemical cells: <https://www.doi.org/10.1016/j.tca.2009.05.010>

Computer-aided K<sub>1</sub>H<sub>2</sub>O<sub>2</sub> gas analysis and Standard Molar Enthalpy of Formation of Ethylammonium Tetrachlorocobaltate(II) Chloride (Ln = Dy, Ho) by solid-state electrochemical cells: <https://www.doi.org/10.1021/jc901051z>

Webbook: <http://webbook.nist.gov/cgi/cbook.cgi?ID=C7440484&Units=SI>

ScienceDirect: <https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure>

Thermodynamic studies on LnCoO<sub>3</sub>(s) (Ln = Dy, Ho) by solid-state electrochemical cells: <https://www.doi.org/10.1016/j.tca.2008.09.023>

# Legend

**affp:** Proton affinity  
**basg:** Gas basicity  
**ea:** Electron affinity  
**ie:** Ionization energy  
**pvap:** Vapor pressure

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