silver

Other names:	argentum
	silver element
Inchi:	InChI=1S/Ag
InchiKey:	BQCADISMDOOEFD-UHFFFAOYSA-N
Formula:	Ag
SMILES:	[Ag]
Mol. weight [g/mol]:	107.87
CAS:	7440-22-4

Physical Properties

Property code	Value	Unit	Source
ea	1.30 ± 0.20	eV	NIST Webbook
ea	1.30 ± 0.03	eV	NIST Webbook
ea	1.30 ± 0.00	eV	NIST Webbook
ea	1.30 ± 0.01	eV	NIST Webbook
hf	284.90 ± 0.80	kJ/mol	NIST Webbook
ie	7.53	eV	NIST Webbook
ie	7.58	eV	NIST Webbook
ie	7.58	eV	NIST Webbook
ie	7.58	eV	NIST Webbook
ie	7.57	eV	NIST Webbook
ie	7.50	eV	NIST Webbook
ie	7.62 ± 0.07	eV	NIST Webbook
ie	7.57	eV	NIST Webbook
ie	7.50 ± 0.30	eV	NIST Webbook
ie	7.58	eV	NIST Webbook
ie	7.80 ± 0.20	eV	NIST Webbook
ie	7.60	eV	NIST Webbook
ie	7.51 ± 0.07	eV	NIST Webbook
sgb	173.00 ± 0.00	J/mol×K	NIST Webbook
SS	42.55 ± 0.20	J/mol×K	NIST Webbook

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source	
dvisc	0.0025400	Paxs	1473.00	A Novel Vibrating Finger Viscometer for High-Temperature Measurements in Liquid Metals and Alloys	
dvisc	0.0024980	Pa×s	1523.00	A Novel Vibrating Finger Viscometer for High-Temperature Measurements in Liquid Metals and Alloys	
dvisc	0.0035200	Paxs	1273.00	A Novel Vibrating Finger Viscometer for High-Temperature Measurements in Liquid Metals and Alloys	
dvisc	0.0029040	Paxs	1323.00	A Novel Vibrating Finger Viscometer for High-Temperature Measurements in Liquid Metals and Alloys	
dvisc	0.0028120	Paxs	1373.00	A Novel Vibrating Finger Viscometer for High-Temperature Measurements in Liquid Metals and Alloys	
dvisc	0.0026490	Paxs	1423.00	A Novel Vibrating Finger Viscometer for High-Temperature Measurements in Liquid Metals and Alloys	
dvisc	0.0023990	Paxs	1573.00	A Novel Vibrating Finger Viscometer for High-Temperature Measurements in Liquid Metals and Alloys	
dvisc	0.0023320	Paxs	1623.00	A Novel Vibrating Finger Viscometer for High-Temperature Measurements in Liquid Metals and Alloys	

dvisc	0.0022140	Paxs	1673.00	A Novel Vibrating Finger Viscometer for High-Temperature Measurements in Liquid Metals and Alloys	
econd	61070000.00	S/m	298.00	Structural and physical studies of the Ag-rich alloys from Ag-Li system	
hvapt	265.10	kJ/mol	1367.00	Mass spectrometric study of the vaporization behaviour of alpha-Na2NpO4: Thermodynamic investigation of the enthalpy of formation	

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.66364e+01
Coeff. B	-2.82950e+04
Coeff. C	-8.12200e+01
Temperature range (K), min.	1283.00
Temperature range (K), max.	2453.15

Sources

A Novel Vibrating Finger Viscometer	https://www.doi.org/10.1007/s10765-016-2104-7
Tor High-Iemperature Measurements In Engine Myanging stability of AuSe at temperature from (400 to 700) K by a	https://www.doi.org/10.1016/j.jct.2013.11.031
Sole state galvanic cell:	https://www.cheric.org/research/kdb/hcprop/showprop.php?cmpid=1944
Enthalpies of mixing of Au Pb and Ag	https://www.doi.org/10.1016/j.tca.2007.07.015
Experimentally determined	https://www.doi.org/10.1016/j.jct.2013.11.006
thermodynamic properties of Jonaphodynamic Ageneziase t widwid 100	https://www.doi.org/10.1016/j.jct.2016.06.013
Mixing enthalpies of liquid Bi-Ni and	https://www.doi.org/10.1016/j.tca.2017.09.002
Ag-Bi-Ni alloys: Calorimetric studies and	https://www.doi.org/10.1016/j.jct.2014.05.021
thermodynamic properties of liquid AgeCtawollendbook of Vapor Pressure:	https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure

Partial and Integral Enthalpies of mixing of Ag-Ga-Sn liquid alloys: NIST Webbook:

The measurement of thermal conductivity variation with Etripsetate and possible system: Calorimetric measurements and first principles to study the (Ag-Li) liquid systempies of mixing of liquid Ag-Ga, Au-Ga and Ag-Au-Ga alloys: Thermodynamic properties of liquid https://www.doi.org/10.1016/j.tca.2011.04.032

http://webbook.nist.gov/cgi/cbook.cgi?ID=C7440224&Units=SI https://www.doi.org/10.1016/j.tca.2012.12.012 https://www.doi.org/10.1016/j.tca.2019.01.016 https://www.doi.org/10.1016/j.jct.2014.10.023 https://www.doi.org/10.1016/j.jct.2016.12.020 https://www.doi.org/10.1016/j.tca.2018.02.012 https://www.doi.org/10.1016/j.jct.2016.12.005 https://www.doi.org/10.1016/j.jct.2016.03.009 https://www.doi.org/10.1016/j.jct.2012.11.034 Mass spectrometric study of the vaporization behaviour of almandzwawdznaou c irrenatiog afficuid ilwestigation and modelling of phase equilibria for the Ageometry spatian phasic for the adjutization solid silver: System Ag Sb: https://www.doi.org/10.1016/j.fluid.2016.02.026

Legend

dvisc:	Dynamic viscosity
ea:	Electron affinity
econd:	Electrical conductivity
hf:	Enthalpy of formation at standard conditions
hvapt:	Enthalpy of vaporization at a given temperature
ie:	Ionization energy
pvap:	Vapor pressure
sgb:	Molar entropy at standard conditions (1 bar)
SS:	Solid phase molar entropy at standard conditions

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