platinum

Other names: platinum element
Inchi: InChI=1S/Pt
InchiKey: BASFCYQUMIYNBI-UHFFFAOYSA-N
Formula: Pt
SMILES: [Pt]
Mol. weight [g/mol]: 195.08
CAS: 7440-06-4

Physical Properties

Property code	Value	Unit	Source
ea	2.12 ± 0.00	eV	NIST Webbook
ea	2.13 ± 0.00	eV	NIST Webbook
ea	2.13 ± 0.00	eV	NIST Webbook
ie	8.60 ± 0.50	eV	NIST Webbook
ie	8.82 ± 0.04	eV	NIST Webbook
ie	9.00	eV	NIST Webbook
ie	9.00	eV	NIST Webbook
ie	9.00	eV	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.77546e+01
Coeff. B	-5.07852e+04
Coeff. C	-2.32130e+02
Temperature range (K), min.	2330.15
Temperature range (K), max.	4098.15

Datasets

Molar heat capacity at constant pressure, J/K/mol

Temperature, K - Liquid	Pressure, kPa - Liquid	Molar heat capacity at constant pressure, J/K/mol - Liquid
2041.20	101.33	38.80

Reference *https://www.doi.org/10.1016/j.jct.2017.04.006*

Sources

Thermodynamic properties of intermetallic PtTe determined by means of a solid state cyclic EMF method:	https://www.doi.org/10.1016/j.jct.2015.09.007
Measurement of spectral emissivity and constant pressure heat capacity of liquid platinum with an electrostatic levitator:	https://www.doi.org/10.1016/j.jct.2017.04.006
Thermodynamics of the Pt-Cl system:	https://www.doi.org/10.1016/j.tca.2008.01.005
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C7440064&Units=SI
The Yaws Handbook of Vapor Pressure:	https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure

Legend

cpl:	Liquid phase heat capacity
ea:	Electron affinity
ie:	Ionization energy
pvap:	Vapor pressure