

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	2.13 ± 0.00	eV	NIST Webbook
ea	2.12 ± 0.00	eV	NIST Webbook
ea	2.13 ± 0.00	eV	NIST Webbook
ie	9.00	eV	NIST Webbook
ie	9.00	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

Correlations

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/(T + C)$
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

Cheméo Relay (1.0, beta):

Thermodynamic properties of intermetallic PtTe determined by means of laser interferometry and constant pressure heat capacity of liquid platinum with an electrostatic levitator:
The Yaws Handbook of Vapor Pressure:
NIST Webbook:

<https://www.doi.org/10.1016/j.jct.2015.09.007>

<https://www.doi.org/10.1016/j.jct.2017.04.006>

<https://www.doi.org/10.1016/j.tca.2008.01.005>

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

<http://webbook.nist.gov/cgi/cbook.cgi?ID=C7440064&Units=SI>

Cheméo Relay (1.0):

Legend

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

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