Barium

Other names: barium element
Inchi: InChI=1S/Ba
InchiKey: DSAJWYNOEDNPEQ-UHFFFAOYSA-N
Formula: Ba
SMILES: [Ba]
Mol. weight [g/mol]: 137.33
CAS: 7440-39-3

Physical Properties

Property code	Value	Unit	Source
ea	0.14 ± 0.00	eV	NIST Webbook
ie	5.21	eV	NIST Webbook
ie	5.30 ± 0.30	eV	NIST Webbook
ie	5.17 ± 0.08	eV	NIST Webbook
ie	5.00 ± 0.30	eV	NIST Webbook
ie	5.00	eV	NIST Webbook
ie	5.10 ± 0.20	eV	NIST Webbook
ie	5.22 ± 0.03	eV	NIST Webbook
ie	5.20 ± 0.10	eV	NIST Webbook
ie	5.20	eV	NIST Webbook
ie	5.21 ± 0.00	eV	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.28986e+01
Coeff. B	-1.79139e+04
Coeff. C	-6.70000e+00
Temperature range (K), min.	911.15
Temperature range (K), max.	2170.15

Sources

Synthesis, Characterization, and Thermodynamic Study of Barium Benzoate Ba(C7H5O2)2(s):	https://www.doi.org/10.1021/je800876t
The Yaws Handbook of Vapor Pressure:	https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure
Determination of the standard Gibbs free energies of formation of barium zirconates in the temperature range (1073 to 1273)K:	https://www.doi.org/10.1016/j.jct.2007.06.001
Standard Molar Enthalpies of Formation for the Two Mixed Alkali Alkaline Earth Metal Borates of LiBaBO3 and NaBaBO3:	https://www.doi.org/10.1016/j.tca.2013.04.009
Crystal structure, lattice potential energy and thermochemical properties of a novel compound barium D-gluconate tetrahydrate:	https://www.doi.org/10.1016/j.jct.2013.10.005
Thermodynamic investigations on barium indate:	https://www.doi.org/10.1016/j.jct.2015.04.035
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C7440393&Units=SI
Cheméo Relay (1.0, beta):	

Legend

ea:	Electron affinity
ie:	Ionization energy
pvap:	Vapor pressure