

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

NIST Webbook:

<http://webbook.nist.gov/cgi/cbook.cgi?ID=C7440393&Units=SI>

The Yaws Handbook of Vapor

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

Pressure:

Determination of the standard Gibbs

<https://www.doi.org/10.1016/j.jct.2007.06.001>

free energies of formation of barium

<https://www.doi.org/10.1016/j.jct.2015.04.035>

thermochemical investigations on

<https://www.doi.org/10.1016/j.tca.2013.04.009>

barium in the temperature range

1000-1400 K:

Standard Molar Enthalpies of

<https://www.doi.org/10.1021/jc800876t>

Formation for the Two Mixed

Synthesis Characterization Bonds of

Barium and Sodium Barium

Benzoate $\text{Ba}(\text{C}_7\text{H}_5\text{O}_2)_2(\text{s})$:

Legend

ea: Electron affinity

ie: Ionization energy

pvap: Vapor pressure

Latest version available from:

<https://www.chemeo.com/cid/12-020-5/barium.pdf>

Generated by Cheméo on 2025-12-23 06:14:19.503233967 +0000 UTC m=+6218657.033274622.

Cheméo (<https://www.chemeo.com>) is the biggest free database of chemical and physical data for the process industry.