

# lithium

Inchi:	InChI=1S/Li
InchiKey:	WHXSMMKQMYFTQS-UHFFFAOYSA-N
Formula:	Li
SMILES:	[Li]
Mol. weight [g/mol]:	6.94
CAS:	7439-93-2

## Physical Properties

Property code	Value	Unit	Source
hf	159.30 ± 1.00	kJ/mol	NIST Webbook
ie	5.39	eV	NIST Webbook
ie	5.39	eV	NIST Webbook
ie	5.36 ± 0.01	eV	NIST Webbook
ie	5.39	eV	NIST Webbook
ie	5.50 ± 0.30	eV	NIST Webbook
ie	5.40	eV	NIST Webbook
ie	5.39	eV	NIST Webbook
ie	5.40 ± 0.20	eV	NIST Webbook
sgb	138.78 ± 0.01	J/mol×K	NIST Webbook
ss	29.12 ± 0.20	J/mol×K	NIST Webbook

## Correlations

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/(T + C)$
Coeff. A	1.59528e+01
Coeff. B	-1.83145e+04
Coeff. C	3.69000e+00
Temperature range (K), min.	797.45
Temperature range (K), max.	1610.25

# Sources

Standard Molar Enthalpies of Formation for the Two Mixed Alkali-Alkali Earth Metal Borates of the $\text{AB}_2\text{B}_2\text{O}_{10}$ Type: First Principles Study of the Thermodynamic Properties of Liquid Ga-Li Alloys: Experiment vs. Modeling: The standard enthalpy of formation of superionic solid electrolyte $\text{Li}_2\text{O}$ and formation of $\text{Li}_{1-x}\text{Mn}_{2-x}\text{O}_4$ (0 less than x less than 0.1) spinel phases: liquid equilibrium in the lithium-lanthanum system: KDB:	<a href="https://www.doi.org/10.1016/j.tca.2013.04.009">https://www.doi.org/10.1016/j.tca.2013.04.009</a> <a href="https://www.doi.org/10.1016/j.jct.2014.10.023">https://www.doi.org/10.1016/j.jct.2014.10.023</a> <a href="https://www.doi.org/10.1016/j.jct.2016.02.015">https://www.doi.org/10.1016/j.jct.2016.02.015</a> <a href="https://www.doi.org/10.1016/j.tca.2017.09.019">https://www.doi.org/10.1016/j.tca.2017.09.019</a> <a href="https://www.doi.org/10.1016/j.tca.2014.11.003">https://www.doi.org/10.1016/j.tca.2014.11.003</a> <a href="https://www.doi.org/10.1016/j.tca.2016.06.021">https://www.doi.org/10.1016/j.tca.2016.06.021</a> <a href="https://www.cheric.org/research/kdb/hcprop/showprop.php?cmpid=1958">https://www.cheric.org/research/kdb/hcprop/showprop.php?cmpid=1958</a>
The heat capacity and entropy of the lithium silicides $\text{Li}_{17}\text{Si}_4$ and $\text{Li}_{16.42}\text{Si}_4$ : Thermodynamic properties of liquid Ag-Li alloys: Thermochemical properties of two mixed alkali-alkaline earth metal borates with O properties for $\text{NaCaBO}_3$ and $\text{Li}_4\text{CaB}_2\text{O}_6$ : Calorimetric measurements of liquid (Al + Li + Zn) alloys: Mixing enthalpy of liquid Ga Li Zn alloys: The Yaws Handbook of Vapor Pressure: Thermodynamic description of the Ga-Li-Zn system: Thermodynamic properties and behaviour of $\text{A}_2[(\text{UO}_2)(\text{MoO}_4)_2]$ compounds: measurements of the liquid system. Direct reaction method and mixing enthalpy:	<a href="https://www.doi.org/10.1016/j.jct.2015.01.004">https://www.doi.org/10.1016/j.jct.2015.01.004</a> <a href="https://www.doi.org/10.1016/j.jct.2016.06.013">https://www.doi.org/10.1016/j.jct.2016.06.013</a> <a href="https://www.doi.org/10.1016/j.jct.2018.02.020">https://www.doi.org/10.1016/j.jct.2018.02.020</a> <a href="http://webbook.nist.gov/cgi/cbook.cgi?ID=C7439932&amp;Units=SI">http://webbook.nist.gov/cgi/cbook.cgi?ID=C7439932&amp;Units=SI</a> <a href="https://www.doi.org/10.1016/j.jct.2015.09.008">https://www.doi.org/10.1016/j.jct.2015.09.008</a> <a href="https://www.doi.org/10.1016/j.tca.2015.12.011">https://www.doi.org/10.1016/j.tca.2015.12.011</a> <a href="https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure">https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure</a> <a href="https://www.doi.org/10.1016/j.tca.2017.10.004">https://www.doi.org/10.1016/j.tca.2017.10.004</a> <a href="https://www.doi.org/10.1016/j.jct.2014.07.009">https://www.doi.org/10.1016/j.jct.2014.07.009</a> <a href="https://www.doi.org/10.1016/j.jct.2016.03.017">https://www.doi.org/10.1016/j.jct.2016.03.017</a>

## Legend

hf:	Enthalpy of formation at standard conditions
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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