

# 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	5.40 ± 0.20	eV	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
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

- Calorimetric measurements and first principles to study the (Ag-Li) liquid system: liquid equilibrium in the lithium-lanthanum system: The standard enthalpy of formation of superionic solid electrolyte  $\text{Li}_7\text{Ba}_3\text{Zr}_2\text{O}_{12}$ : <https://www.doi.org/10.1016/j.jct.2014.10.023>
- Enthalpy of formation of  $\text{Li}_{1+x}\text{Mn}_{2-x}\text{O}_4$  (0 less than x less than 0.1) spinel phases: heat capacity and entropy of the lithium silicides  $\text{Li}_{17}\text{Si}_4$  and  $\text{Li}_{16.42}\text{Si}_4$  from the temperature range of (2 to 373) K: calorimetric measurements of the Li-Zn system. Direct reaction method and thermodynamic properties of liquid Ga-Li alloys: Experiment vs. modeling: Thermodynamic properties and behaviour of  $\text{A}_2(\text{UO}_2)(\text{MoO}_4)_2$  compounds with A = Li, Na, K, Rb, and Cs: Thermodynamic properties of liquid Ag-Li alloys: Thermodynamic description of the Ga-Li-Zn system: Thermochemical properties of two mixed alkali-alkaline earth metal borates with  $\text{Li}_2\text{O}$  properties for  $\text{NaCaBO}_3$  and  $\text{Li}_4\text{CaB}_2\text{O}_6$ : Standard Molar Enthalpies of Formation for the Two Mixed Alkali-Alkaline Earth Metal Borates of  $\text{Li}_2\text{O}$   $\text{NaBaB}_9\text{O}_{15}$  and  $\text{NaBaB}_9\text{O}_{15}$ : Calorimetric measurements of liquid (Al + Li + Zn) alloys: <https://www.doi.org/10.1016/j.jct.2014.11.003>
- <https://www.doi.org/10.1016/j.jct.2015.01.004>
- <https://www.doi.org/10.1016/j.jct.2016.03.017>
- <https://www.doi.org/10.1016/j.jct.2016.02.015>
- <https://www.doi.org/10.1016/j.jct.2014.07.009>
- <https://www.doi.org/10.1016/j.tca.2015.12.011>
- <https://www.doi.org/10.1016/j.jct.2016.06.013>
- <https://www.doi.org/10.1016/j.tca.2017.10.004>
- <https://www.doi.org/10.1016/j.jct.2018.02.020>
- <http://webbook.nist.gov/cgi/cbook.cgi?ID=C7439932&Units=SI>
- <https://www.doi.org/10.1016/j.tca.2013.04.009>
- <https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure>
- <https://www.doi.org/10.1016/j.jct.2015.09.008>

## Legend

- hf: Enthalpy of formation at standard conditions
- ie: Ionization energy
- vpap: Vapor pressure
- sgb: Molar entropy at standard conditions (1 bar)
- ss: Solid phase molar entropy at standard conditions

Latest version available from:

<https://www.cheméo.com/cid/34-565-7/lithium.pdf>

Generated by Cheméo on 2024-03-13 07:04:33.952118581 +0000 UTC m=+12602722.872695919.

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