

Sodium

Other names:	NATRIUM
Inchi:	InChI=1S/Na
InchiKey:	KEAYESYHFKHZAL-UHFFFAOYSA-N
Formula:	Na
SMILES:	[Na]
Mol. weight [g/mol]:	22.99
CAS:	7440-23-5

Physical Properties

Property code	Value	Unit	Source
ea	0.55 ± 0.00	eV	NIST Webbook
hf	107.50 ± 0.70	kJ/mol	NIST Webbook
ie	5.14 ± 0.04	eV	NIST Webbook
ie	5.60 ± 0.30	eV	NIST Webbook
ie	5.14	eV	NIST Webbook
ie	5.30 ± 0.20	eV	NIST Webbook
ie	5.14	eV	NIST Webbook
ie	5.14	eV	NIST Webbook
ie	5.14	eV	NIST Webbook
ie	5.60 ± 0.20	eV	NIST Webbook
ie	5.20	eV	NIST Webbook
nfpaf	%!d(float64=1)		KDB
nfpah	%!d(float64=3)		KDB
sgb	153.72 ± 0.00	J/mol×K	NIST Webbook
ss	51.30 ± 0.20	J/mol×K	NIST Webbook
tb	1156.00 ± 1.00	K	NIST Webbook
tf	370.96 ± 0.01	K	NIST Webbook
tt	370.98 ± 0.03	K	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)

Coeff. A	1.48762e+01
Coeff. B	-1.16533e+04
Coeff. C	-1.88000e+01
Temperature range (K), min.	553.75
Temperature range (K), max.	1200.00

Sources

Crystal structure and thermochemical properties of a novel coordination compound and enthalpies of Na, K, Rb and Cs salts by reaction with 1,2-ethanediol and 1,4-butanediol and standard molar enthalpy of formation of thermally stable sodium (s): Na₂U₂O₇ using Knudsen effusion mass spectrometry and high temperature X-ray diffraction: Thermochemical properties of two mixed alkali-alkaline earth metal borates as nonlinear optical materials: NaSrBO₃ and KSr₄B₃O₉: KDB: <https://www.doi.org/10.1016/j.jct.2014.06.029>
<https://www.doi.org/10.1016/j.jct.2017.07.025>
<https://www.doi.org/10.1016/j.tca.2008.12.029>
<https://www.doi.org/10.1016/j.jct.2015.06.026>
<https://www.doi.org/10.1016/j.jct.2013.11.033>
<http://webbook.nist.gov/cgi/cbook.cgi?ID=C7440235&Units=SI>
<https://www.therc.org/research/kdb/hcprop/showprop.php?cmpid=1959>
Standard molar enthalpies of formation of sodium alkoxides: <https://www.doi.org/10.1016/j.jct.2006.07.024>
Thermochemical properties of two mixed alkali-alkaline earth metal borates with NaClO₄: Determination of the standard enthalpy of formation and pressure entropy at 298.15 K: Standard Molar Enthalpies of Formation for the Two Mixed Alkali-Borate Earth Metal Borates of LiBaB₉O₁₅ and NaBaB₉O₁₅: Mass spectrometric study of the vaporization behaviour of alpha-Na₂NpO₄: Thermodynamic investigation of the enthalpy of formation: <https://www.doi.org/10.1016/j.jct.2012.11.034>
<https://www.doi.org/10.1016/j.jct.2018.02.020>
<https://www.doi.org/10.1016/j.jct.2018.01.016>
<https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure>
<https://www.doi.org/10.1016/j.tca.2013.04.009>

Legend

ea:	Electron affinity
hf:	Enthalpy of formation at standard conditions
ie:	Ionization energy
nfpaf:	NFPA Fire Rating
nfpah:	NFPA Health Rating
pvap:	Vapor pressure
sgb:	Molar entropy at standard conditions (1 bar)
ss:	Solid phase molar entropy at standard conditions
tb:	Normal Boiling Point Temperature
tf:	Normal melting (fusion) point
tt:	Triple Point Temperature

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