sodium fluoride

Inchi: InChI=1S/FH.Na/h1H;/q;+1/p-1
InchiKey: PUZPDOWCWNUUKD-UHFFFAOYSA-M
Formula: FNa
SMILES: F[Na]
Mol. weight [g/mol]: 41.99
CAS: 7681-49-4

Physical Properties

Property code	Value	Unit	Source
ea	0.52 ± 0.01	eV	NIST Webbook
ea	1.10 ± 0.20	eV	NIST Webbook
ea	0.42	eV	NIST Webbook
ea	1.12 ± 0.21	eV	NIST Webbook
ea	1.35	eV	NIST Webbook

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cps	62.25	J/mol×K	1102.90	Calorimetric analysis of NaF and NaLaF4
cps	58.08	J/mol×K	630.60	Calorimetric analysis of NaF and NaLaF4
cps	58.11	J/mol×K	645.60	Calorimetric analysis of NaF and NaLaF4
cps	59.55	J/mol×K	675.70	Calorimetric analysis of NaF and NaLaF4
cps	59.36	J/mol×K	690.60	Calorimetric analysis of NaF and NaLaF4
cps	58.15	J/mol×K	720.60	Calorimetric analysis of NaF and NaLaF4
cps	59.11	J/mol×K	735.50	Calorimetric analysis of NaF and NaLaF4

cps	58.85	J/mol×K	750.60	Calorimetric analysis of NaF and NaLaF4
cps	59.28	J/mol×K	765.60	Calorimetric analysis of NaF and NaLaF4
cps	58.36	J/mol×K	795.60	Calorimetric analysis of NaF and NaLaF4
cps	58.26	J/mol×K	825.50	Calorimetric analysis of NaF and NaLaF4
cps	58.49	J/mol×K	840.40	Calorimetric analysis of NaF and NaLaF4
cps	59.14	J/mol×K	855.60	Calorimetric analysis of NaF and NaLaF4
cps	58.37	J/mol×K	870.60	Calorimetric analysis of NaF and NaLaF4
cps	59.37	J/mol×K	885.50	Calorimetric analysis of NaF and NaLaF4
cps	59.70	J/mol×K	900.50	Calorimetric analysis of NaF and NaLaF4
cps	60.11	J/mol×K	915.50	Calorimetric analysis of NaF and NaLaF4
cps	59.64	J/mol×K	945.50	Calorimetric analysis of NaF and NaLaF4
cps	60.43	J/mol×K	960.60	Calorimetric analysis of NaF and NaLaF4
cps	59.89	J/mol×K	975.40	Calorimetric analysis of NaF and NaLaF4
cps	61.01	J/mol×K	990.50	Calorimetric analysis of NaF and NaLaF4
cps	59.76	J/mol×K	907.50	Calorimetric analysis of NaF and NaLaF4
cps	60.21	J/mol×K	922.30	Calorimetric analysis of NaF and NaLaF4
cps	60.58	J/mol×K	937.40	Calorimetric analysis of NaF and NaLaF4
cps	59.98	J/mol×K	952.50	Calorimetric analysis of NaF and NaLaF4
cps	60.92	J/mol×K	967.50	Calorimetric analysis of NaF and NaLaF4

cps	60.11	J/mol×K	982.60	Calorimetric analysis of NaF and NaLaF4
cps	60.91	J/mol×K	997.50	Calorimetric analysis of NaF and NaLaF4
cps	61.02	J/mol×K	1012.60	Calorimetric analysis of NaF and NaLaF4
cps	60.56	J/mol×K	1027.60	Calorimetric analysis of NaF and NaLaF4
cps	61.86	J/mol×K	1042.60	Calorimetric analysis of NaF and NaLaF4
cps	61.63	J/mol×K	1057.70	Calorimetric analysis of NaF and NaLaF4
cps	62.08	J/mol×K	1072.70	Calorimetric analysis of NaF and NaLaF4
cps	62.41	J/mol×K	1087.80	Calorimetric analysis of NaF and NaLaF4
srf	0.19	N/m	1325.00	Surface tension of light rare earth fluoride molten salts electrolytesystem

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.78327e+01
Coeff. B	-2.62688e+04
Coeff. C	5.17000e+00
Temperature range (K), min.	1269.00
Temperature range (K), max.	2060.00

Sources

Activity coefficients of NaF in aqueous mixtures with e-increasing co-solvent: N-methylformamide-water mixtures at 298.15 K:	https://www.doi.org/10.1016/j.fluid.2016.05.019
Calorimetric analysis of NaF and NaLaF4	https://www.doi.org/10.1016/j.jct.2006.03.002

Enthalpies of Dilution of (2S,3R,4R,5R)-Hexane-1,2,3,4,5,6-hexol in Water and Aqueous Sodium Halide Solutions at (298.15 and 318.15) K:	https://www.doi.org/10.1021/je1007394
Surface Tension and Density in the KF-NaF-AlF3 Based Electrolyte:	https://www.doi.org/10.1021/je2005825
Surface tension of light rare earth fluoride molten salts electrolytesystem:	https://www.doi.org/10.1016/j.tca.2016.03.033
Solubility measurements in Na-F-CO3-HCO3-H2O system at (308.15 and 323.15) K and development of a Pitzer based equilibrium model for the Na-F-Cl-SO4-CO3-HCO3-H2O system:	https://www.doi.org/10.1016/j.jct.2018.10.029
The Yaws Handbook of Vapor Pressure:	https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure
Partial molar volume and partial molar compressibility of four homologous alpha-amino acids in aqueous sodium fluoride solutions at different temperatures:	https://www.doi.org/10.1016/j.jct.2011.01.004
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C7681494&Units=SI
Physicochemical properties of the system(LiF + NaF + KF(eut.) + NdF3): Phase equilibria, density and volume properties, viscosity and surface tension:	https://www.doi.org/10.1016/j.jct.2014.03.024
Electrical Conductivity of Electrolytes Found in Natural Waters from (5 to 90) °C:	https://www.doi.org/10.1021/je101012n
Temperature Dependence of the Density of Aqueous Alkali Halide Salt Solutions by Experiment and Molecular Simulation:	https://www.doi.org/10.1021/je500420g
Liquid-liquid equilibria of hydrophilic alcohol + sodiumhydroxide + water systems: Experimental and correlation:	https://www.doi.org/10.1016/j.tca.2013.06.008
Activity coefficients of NaF in (glucose + water) and (sucrose + water) mixtures at 298.15 K:	https://www.doi.org/10.1016/j.jct.2004.07.002

Legend

cps:	Solid phase heat capacity
ea:	Electron affinity
pvap:	Vapor pressure
srf:	Surface Tension