

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	$\ln(P_{vp}) = A + B/(T + C)$
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: Rare earth fluoride molten salts at 298.15 K. Possibility of four homologous alpha-amino acids in aqueous sodium fluoride solutions at different temperatures: <https://www.doi.org/10.1016/j.fluid.2016.05.019>
- Rare earth fluoride molten salts at 298.15 K. Possibility 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>

Liquid liquid equilibria of hydrophilic alcohol + sodiumhydroxide + water	https://www.doi.org/10.1016/j.tca.2013.06.008
Systems: Experimental and computational: + water) and (sucrose + water) mixtures	https://www.doi.org/10.1016/j.jct.2004.07.002
Temperature Dependence of the Density of Aqueous Alkali Halide Salt Solutions by Experiment and Molecular Simulation	https://www.doi.org/10.1021/je500420g
Solvation by Water	https://www.doi.org/10.1016/j.jct.2014.03.024
NaF-KF system at low temperature	https://www.doi.org/10.1016/j.tca.2016.03.033
The Yaws Handbook of vapor pressure and surface tension of molten salts electrolyte system:	https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure-and-surface-tension-of-molten-salts-electrolyte-system
Pressure:	https://www.doi.org/10.1016/j.jct.2018.10.029
Solubility measurements in Na-F-CO₃-HCO₃-H₂O system at (308.15 K)	https://www.doi.org/10.1021/je1007394
Enthalpies of Dilution of a K₂CO₃-RbF-RbCl system from 293.15 K to 318.15 K	https://www.doi.org/10.1016/j.jct.2006.03.002
NaAlF₆-K₂CO₃-NaCl-NaOH-H₂O salt system at T = (293.15 to 318.15) K: NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C7681494&Units=SI
Surface Tension and Density in the KF-NaF-AlF₃-Based Electrolyte: Electrical Conductivity of Electrolytes Found In Natural Waters from (5 to 90 deg C :	https://www.doi.org/10.1021/je2005825
	https://www.doi.org/10.1021/je101012n

Legend

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

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