

Fluorine nitrate

Inchi:	InChI=1S/FNO3/c1-5-2(3)4
InchiKey:	VHFBTKQOIBRGQP-UHFFFAOYSA-N
Formula:	FNO3
SMILES:	O=[N+](O-)OF
Mol. weight [g/mol]:	81.00
CAS:	7789-26-6

Physical Properties

Property code	Value	Unit	Source
gf	-315.14	kJ/mol	Joback Method
hf	-382.42	kJ/mol	Joback Method
hfus	11.38	kJ/mol	Joback Method
hvap	33.78	kJ/mol	Joback Method
log10ws	-0.83		Crippen Method
logp	0.079		Crippen Method
mcvol	35.920	ml/mol	McGowan Method
pc	6219.59	kPa	Joback Method
tb	231.00 ± 4.00	K	NIST Webbook
tc	575.54	K	Joback Method
tf	256.19	K	Joback Method
vc	0.153	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	62.73	J/molxK	372.93	Joback Method
cpg	64.91	J/molxK	406.70	Joback Method
cpg	67.06	J/molxK	440.47	Joback Method
cpg	69.18	J/molxK	474.23	Joback Method
cpg	71.26	J/molxK	508.00	Joback Method
cpg	73.30	J/molxK	541.77	Joback Method
cpg	75.27	J/molxK	575.54	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/(T + C)$
Coeff. A	1.30390e+01
Coeff. B	-1.66128e+03
Coeff. C	-2.98600e+01
Temperature range (K), min.	113.15
Temperature range (K), max.	227.15

Sources

Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws
Joback Method:	https://en.wikipedia.org/wiki/Joback_method
McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C7789266&Units=SI
The Yaws Handbook of Vapor Pressure:	https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci9903071

Legend

cpg:	Ideal gas heat capacity
gf:	Standard Gibbs free energy of formation
hf:	Enthalpy of formation at standard conditions
hfus:	Enthalpy of fusion at standard conditions
hvac:	Enthalpy of vaporization at standard conditions
log10ws:	Log10 of Water solubility in mol/l
logp:	Octanol/Water partition coefficient
mccvol:	McGowan's characteristic volume
pc:	Critical Pressure
pvap:	Vapor pressure
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume

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