Decane, 1-fluoro-

Other names:	1-Fluorodecane
	Decyl fluoride
	n-Decyl fluoride
Inchi:	InChI=1S/C10H21F/c1-2-3-4-5-6-7-8-9-10-11/h2-10H2,1H3
InchiKey:	LHLRHWJTTUCDQA-UHFFFAOYSA-N
Formula:	C10H21F
SMILES:	CCCCCCCCCCF
Mol. weight [g/mol]:	160.27
CAS:	334-56-5

Physical Properties

Property code	Value	Unit	Source
gf	-161.49	kJ/mol	Joback Method
hf	-445.84	kJ/mol	Joback Method
hfus	24.74	kJ/mol	Joback Method
hvap	37.04	kJ/mol	Joback Method
log10ws	-3.86		Crippen Method
logp	4.097		Crippen Method
mcvol	153.530	ml/mol	McGowan Method
pc	2023.58	kPa	Joback Method
tb	459.40	K	NIST Webbook
tc	582.13	K	Joback Method
tf	203.05	K	Joback Method
vc	0.614	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	323.47	J/mol×K	427.47	Joback Method
cpg	337.88	J/mol×K	453.25	Joback Method
cpg	351.78	J/mol×K	479.02	Joback Method
cpg	365.18	J/mol×K	504.80	Joback Method
cpg	378.10	J/mol×K	530.58	Joback Method
cpg	390.55	J/mol×K	556.35	Joback Method

cpg	402.53	J/mol×K	582.13	Joback Method
hvapt	50.40	kJ/mol	422.50	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.47537e+01
Coeff. B	-3.95836e+03
Coeff. C	-6.88490e+01
Temperature range (K), min.	342.48
Temperature range (K), max.	488.07

Sources

Crippen Method: http://pubs.acs.org/doi/abs/10.1021/ci990307l

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=C334565&Units=SI

The Yaws Handbook of Vapor Pressure: https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure

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
hvap: Enthalpy of vaporization at standard conditions
hvapt: Enthalpy of vaporization at a given temperature
log10ws: Log10 of Water solubility in mol/l
logp: Octanol/Water partition coefficient
mcvol: 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