3-Ethylnonane

Other names: Nonane, 3-ethyl
Inchi: InChI=1S/C11H24/c1-4-7-8-9-10-11(5-2)6-3/h11H,4-10H2,1-3H3
InchiKey: FKJSIWPQZCKMIL-UHFFFAOYSA-N
Formula: C11H24
SMILES: CCCCCCC(CC)CC
Mol. weight [g/mol]: 156.31
CAS: 17302-11-3

Physical Properties

Property code	Value	Unit	Source
gf	39.30	kJ/mol	Joback Method
hf	-275.65	kJ/mol	Joback Method
hfus	20.72	kJ/mol	Joback Method
hvap	39.69	kJ/mol	Joback Method
log10ws	-4.19		Crippen Method
logp	4.393		Crippen Method
mcvol	165.850	ml/mol	McGowan Method
pc	1947.51	kPa	Joback Method
rinpol	1067.71		NIST Webbook
rinpol	1070.00		NIST Webbook
rinpol	1064.00		NIST Webbook
rinpol	1059.30		NIST Webbook
rinpol	1067.00		NIST Webbook
rinpol	1067.86		NIST Webbook
rinpol	1070.00		NIST Webbook
rinpol	1067.56		NIST Webbook
rinpol	1068.00		NIST Webbook
rinpol	1067.02		NIST Webbook
rinpol	1067.23		NIST Webbook
rinpol	1067.34		NIST Webbook
rinpol	1062.00		NIST Webbook
tb	450.64	K	Joback Method
tc	615.77	K	Joback Method
tf	198.73	K	Joback Method
vc	0.645	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	360.10	J/mol×K	450.64	Joback Method
cpg	435.99	J/mol×K	588.25	Joback Method
cpg	421.98	J/mol×K	560.73	Joback Method
cpg	407.41	J/mol×K	533.20	Joback Method
cpg	392.24	J/mol×K	505.68	Joback Method
cpg	376.48	J/mol×K	478.16	Joback Method
cpg	449.44	J/mol×K	615.77	Joback Method
dvisc	0.0002156	Pa×s	450.64	Joback Method
dvisc	0.0002956	Pa×s	408.65	Joback Method
dvisc	0.0004357	Pa×s	366.67	Joback Method
dvisc	0.0007098	Pa×s	324.69	Joback Method
dvisc	0.0013369	Pa×s	282.70	Joback Method
dvisc	0.0031400	Pa×s	240.72	Joback Method
dvisc	0.0105797	Pa×s	198.73	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.41465e+01
Coeff. B	-3.57973e+03
Coeff. C	-8.54500e+01
Temperature range (K), min.	343.75
Temperature range (K), max.	490.63

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=R8805&Units=SI

Legend

cpg:	Ideal gas heat capacity
dvisc:	Dynamic viscosity
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
log10ws:	Log10 of Water solubility in mol/l
logp:	Octanol/Water partition coefficient
mcvol:	McGowan's characteristic volume
pc:	Critical Pressure
pvap:	Vapor pressure
rinpol:	Non-polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume