dooctacontane

Inchi: InChI=1S/C82H166/c1-3-5-7-9-11-13-15-17-19-21-23-25-27-29-31-33-35-37-39-41-43-45
InchiKey: UXMDGVPNICZCNN-UHFFFAOYSA-N
Formula: C82H166
SMILES: CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
Mol. weight [g/mol]: 1152.20
CAS: 7719-95-1

Physical Properties

Property code	Value	Unit	Source
gf	639.56	kJ/mol	Joback Method
hf	-1735.81	kJ/mol	Joback Method
hfus	208.14	kJ/mol	Joback Method
hvap	387.20 ± 3.80	kJ/mol	NIST Webbook
log10ws	-34.15		Crippen Method
logp	32.234		Crippen Method
mcvol	1166.240	ml/mol	McGowan Method
pc	121.02	kPa	Joback Method
tb	2075.56	K	Joback Method
tf	383.50 ± 0.30	K	NIST Webbook
vc	4.628	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	5615.44	J/mol×K	2075.56	Joback Method
cpg	3158.41	J/mol×K	583.89	Joback Method
dvisc	1.1156805e-08	Pa×s	1544.73	Joback Method
dvisc	0.0000002	Pa×s	1013.90	Joback Method
dvisc	5.2308074e-08	Pa×s	1190.84	Joback Method
dvisc	2.1860020e-08	Pa×s	1367.79	Joback Method
dvisc	6.5384068e-09	Pa×s	1721.67	Joback Method
dvisc	4.2331104e-09	Pa×s	1898.62	Joback Method
dvisc	2.9514817e-09	Pa×s	2075.56	Joback Method
hvapt	185.30	kJ/mol	824.00	NIST Webbook

Sources

NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C7719951&Units=SI
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

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
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
tb:	Normal Boiling Point Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume

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