1-Dotriacontene

Other names: dotriacontan-1-ene
Inchi: InChI=1S/C32H64/c1-3-5-7-9-11-13-15-17-19-21-23-25-27-29-31-32-30-28-26-24-22-20-
InchiKey: WMRDPJYQERQCEP-UHFFFAOYSA-N
Formula: C32H64
SMILES: C=CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
Mol. weight [g/mol]: 448.85
CAS: 18435-55-7

Physical Properties

Property code	Value	Unit	Source
gf	306.40	kJ/mol	Joback Method
hf	-578.38	kJ/mol	Joback Method
hfus	77.36	kJ/mol	Joback Method
hvap	86.16	kJ/mol	Joback Method
log10ws	-13.07		Crippen Method
logp	12.505		Crippen Method
mcvol	457.440	ml/mol	McGowan Method
pc	554.15	kPa	Joback Method
rinpol	3188.00		NIST Webbook
rinpol	3188.00		NIST Webbook
tb	928.24	K	Joback Method
tc	1151.65	K	Joback Method
tf	448.64	K	Joback Method
vc	1.808	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	1736.68	J/mol×K	1151.65	Joback Method
cpg	1715.39	J/mol×K	1114.41	Joback Method
cpg	1692.87	J/mol×K	1077.18	Joback Method
cpg	1668.99	J/mol×K	1039.94	Joback Method
cpg	1643.63	J/mol×K	1002.71	Joback Method
cpg	1616.68	J/mol×K	965.47	Joback Method

cpg	1588.01	J/mol×K	928.24	Joback Method
dvisc	0.0008223	Pa×s	448.64	Joback Method
dvisc	0.0000193	Pa×s	928.24	Joback Method
dvisc	0.0000269	Pa×s	848.31	Joback Method
dvisc	0.0000400	Pa×s	768.37	Joback Method
dvisc	0.0000655	Pa×s	688.44	Joback Method
dvisc	0.0001220	Pa×s	608.51	Joback Method
dvisc	0.0002742	Pa×s	528.57	Joback Method
hvapt	119.80	kJ/mol	606.00	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.51987e+01
Coeff. B	-6.28750e+03
Coeff. C	-1.46356e+02
Temperature range (K), min.	568.02
Temperature range (K), max.	782.27

Sources

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/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=C18435557&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
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
rinpol:	Non-polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume