5-Methyltricosane

Other names: Tricosane, 5-methyl
Inchi: InChI=1S/C24H50/c1-4-6-8-9-10-11-12-13-14-15-16-17-18-19-20-21-23-24(3)22-7-5-2/h2
InchiKey: MWORWWXTNWRHAD-UHFFFAOYSA-N
Formula: C24H50
SMILES: CCCCCCCCCCCCCCCCCCC(C)CCCC
Mol. weight [g/mol]: 338.65
CAS: 22331-09-5

Physical Properties

Property code	Value	Unit	Source
gf	148.76	kJ/mol	Joback Method
hf	-543.97	kJ/mol	Joback Method
hfus	54.39	kJ/mol	Joback Method
hvap	68.63	kJ/mol	Joback Method
log10ws	-9.63		Crippen Method
logp	9.464		Crippen Method
mcvol	349.020	ml/mol	McGowan Method
pc	809.83	kPa	Joback Method
rinpol	2352.00		NIST Webbook
rinpol	2346.30		NIST Webbook
rinpol	2350.00		NIST Webbook
rinpol	2348.00		NIST Webbook
rinpol	2349.00		NIST Webbook
rinpol	2352.00		NIST Webbook
rinpol	2347.00		NIST Webbook
rinpol	2352.00		NIST Webbook
rinpol	2352.90		NIST Webbook
rinpol	2351.00		NIST Webbook
rinpol	2354.00		NIST Webbook
rinpol	2346.00		NIST Webbook
rinpol	2351.00		NIST Webbook
rinpol	2349.00		NIST Webbook
ripol	2348.70		NIST Webbook
ripol	2348.70		NIST Webbook
tb	748.08	K	Joback Method
tc	918.22	K	Joback Method
tf	345.24	K	Joback Method

vc	1.373	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	1087.86	J/mol×K	748.08	Joback Method
cpg	1110.78	J/mol×K	776.44	Joback Method
cpg	1132.66	J/mol×K	804.79	Joback Method
cpg	1153.54	J/mol×K	833.15	Joback Method
cpg	1173.45	J/mol×K	861.51	Joback Method
cpg	1192.43	J/mol×K	889.86	Joback Method
cpg	1210.52	J/mol×K	918.22	Joback Method
dvisc	0.0031119	Pa×s	345.24	Joback Method
dvisc	0.0009096	Pa×s	412.38	Joback Method
dvisc	0.0003752	Pa×s	479.52	Joback Method
dvisc	0.0001924	Pa×s	546.66	Joback Method
dvisc	0.0001142	Pa×s	613.80	Joback Method
dvisc	0.0000751	Pa×s	680.94	Joback Method
dvisc	0.0000532	Pa×s	748.08	Joback Method
hvapt	79.60	kJ/mol	578.00	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.89936e+01
Coeff. B	-9.27150e+03
Coeff. C	-8.29900e+00
Temperature range (K), min.	503.94
Temperature range (K), max.	685.94

Sources

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C22331095&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/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
pvap:	Vapor pressure
rinpol:	Non-polar retention indices
ripol:	Polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume