

12-methyltricosane

Other names:	Tricosane, 12-methyl
Inchi:	InChI=1S/C24H50/c1-4-6-8-10-12-14-16-18-20-22-24(3)23-21-19-17-15-13-11-9-7-5-2/h
InchiKey:	RDTOGNLPXWGYBE-UHFFFAOYSA-N
Formula:	C24H50
SMILES:	CCCCCCCCCCCC(C)CCCCCCCCCCC
Mol. weight [g/mol]:	338.65
CAS:	22331-52-8

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	2340.00		NIST Webbook
rinpol	2340.00		NIST Webbook
rinpol	2337.00		NIST Webbook
rinpol	2337.00		NIST Webbook
rinpol	2333.00		NIST Webbook
rinpol	2338.00		NIST Webbook
rinpol	2337.00		NIST Webbook
rinpol	2340.00		NIST Webbook
rinpol	2338.00		NIST Webbook
tb	748.08	K	Joback Method
tc	918.22	K	Joback Method
tf	345.24	K	Joback Method
vc	1.373	m ³ /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	Paxs	345.24	Joback Method
dvisc	0.0009096	Paxs	412.38	Joback Method
dvisc	0.0003752	Paxs	479.52	Joback Method
dvisc	0.0001924	Paxs	546.66	Joback Method
dvisc	0.0001142	Paxs	613.80	Joback Method
dvisc	0.0000751	Paxs	680.94	Joback Method
dvisc	0.0000532	Paxs	748.08	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/(T + C)$
Coeff. A	2.00814e+01
Coeff. B	-1.01663e+04
Temperature range (K), min.	513.61
Temperature range (K), max.	688.31

Sources

McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=R214141&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/ci9903071
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws
Joback Method:	https://en.wikipedia.org/wiki/Joback_method

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
rinpolar:	Non-polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume

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