Cyclotetracosane

Inchi: InChI=1S/C24H48/c1-2-4-6-8-10-12-14-16-18-20-22-24-23-21-19-17-15-13-11-9-7-5-3-1/
InchiKey: OOTMSKDHDITFHF-UHFFFAOYSA-N
Formula: C24H48
SMILES: C1CCCCCCCCCCCCCCCCCCCCCCCC1
Mol. weight [g/mol]: 336.64
CAS: 297-03-0

Physical Properties

Property code	Value	Unit	Source
gf	-34.44	kJ/mol	Joback Method
hf	-574.91	kJ/mol	Joback Method
hfus	10.88	kJ/mol	Joback Method
hvap	72.85	kJ/mol	Joback Method
log10ws	-9.76		Crippen Method
logp	9.362		Crippen Method
mcvol	338.160	ml/mol	McGowan Method
pc	1245.09	kPa	Joback Method
rinpol	2589.00		NIST Webbook
tb	849.60	K	Joback Method
tc	1120.84	K	Joback Method
tf	322.00 ± 0.30	K	NIST Webbook
tf	319.90 ± 2.00	K	NIST Webbook
tf	320.00 ± 3.00	K	NIST Webbook
tf	320.00 ± 3.00	K	NIST Webbook
vc	1.169	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	1299.36	J/mol×K	1120.84	Joback Method
cpg	1292.07	J/mol×K	1075.64	Joback Method
cpg	1279.42	J/mol×K	1030.43	Joback Method
cpg	1261.53	J/mol×K	985.22	Joback Method
cpg	1238.53	J/mol×K	940.01	Joback Method

cpg	1210.54	J/mol×K	894.81	Joback Method
cpg	1177.69	J/mol×K	849.60	Joback Method
dvisc	0.0782183	Pa×s	308.50	Joback Method
dvisc	6.4841321e-08	Pa×s	849.60	Joback Method
dvisc	0.0000002	Pa×s	759.42	Joback Method
dvisc	0.0000006	Pa×s	669.23	Joback Method
dvisc	0.0000027	Pa×s	579.05	Joback Method
dvisc	0.0000235	Pa×s	488.87	Joback Method
dvisc	0.0005412	Pa×s	398.68	Joback Method
hfust	10.80	kJ/mol	322.00	NIST Webbook

Sources

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C297030&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
hfust: Enthalpy of fusion at a given temperature
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
rinpol: Non-polar retention indices
tb: Normal Boiling Point Temperature
tc: Critical Temperature
tf: Normal melting (fusion) point
vc: Critical Volume