Cyclooctacosane

Inchi: InChI=1S/C28H56/c1-2-4-6-8-10-12-14-16-18-20-22-24-26-28-27-25-23-21-19-17-15-13-

InchiKey: UWXTYOJKSPHFNG-UHFFFAOYSA-N

Formula: C28H56

SMILES: C1CCCCCCCCCCCCCCCCCCCCCCCCCCCC1

Mol. weight [g/mol]: 392.74

CAS: 297-24-5

Physical Properties

Property code	Value	Unit	Source
gf	-49.16	kJ/mol	Joback Method
hf	-682.11	kJ/mol	Joback Method
hfus	12.84	kJ/mol	Joback Method
hvap	82.44	kJ/mol	Joback Method
log10ws	-11.44		Crippen Method
logp	10.923		Crippen Method
mcvol	394.520	ml/mol	McGowan Method
pc	1028.60	kPa	Joback Method
rinpol	2795.00		NIST Webbook
rinpol	2795.00		NIST Webbook
tb	958.20	K	Joback Method
tc	1235.11	K	Joback Method
tf	321.00 ± 3.00	K	NIST Webbook
tf	321.00 ± 4.00	K	NIST Webbook
tf	321.00 ± 4.00	K	NIST Webbook
tf	321.00 ± 4.00	K	NIST Webbook
vc	1.361	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	1458.87	J/mol×K	958.20	Joback Method
cpg	1515.71	J/mol×K	1188.96	Joback Method
cpg	1517.94	J/mol×K	1142.81	Joback Method
cpg	1513.19	J/mol×K	1096.66	Joback Method

cpg	1501.64	J/mol×K	1050.50	Joback Method
cpg	1483.48	J/mol×K	1004.35	Joback Method
cpg	1506.34	J/mol×K	1235.11	Joback Method
dvisc	4.5404678e-09	Pa×s	958.20	Joback Method
dvisc	1.2447182e-08	Pa×s	855.08	Joback Method
dvisc	4.4994418e-08	Pa×s	751.97	Joback Method
dvisc	0.0000002	Pa×s	648.85	Joback Method
dvisc	0.0000025	Pa×s	545.73	Joback Method
dvisc	0.0000772	Pa×s	442.62	Joback Method
dvisc	0.0188660	Pa×s	339.50	Joback Method

Sources

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=C297245&Units=SI
Crippen Method: http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method: https://www.chemeo.com/doc/models/crippen_log10ws

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

Latest version available from: