

Pentacosane-8,10-dione

Inchi:	InChI=1S/C25H48O2/c1-3-5-7-9-10-11-12-13-14-15-16-18-20-22-25(27)23-24(26)21-19-
InchiKey:	ITULYPCIBTXTNO-UHFFFAOYSA-N
Formula:	C25H48O2
SMILES:	CCCCCCCCCCCCCCCC(=O)CC(=O)CCCCCCC
Mol. weight [g/mol]:	380.65
CAS:	95605-25-7

Physical Properties

Property code	Value	Unit	Source
gf	-98.22	kJ/mol	Joback Method
hf	-784.49	kJ/mol	Joback Method
hfus	63.70	kJ/mol	Joback Method
hvap	84.74	kJ/mol	Joback Method
log10ws	-8.85		Crippen Method
logp	8.357		Crippen Method
mvol	366.250	ml/mol	McGowan Method
pc	820.07	kPa	Joback Method
rinpol	2773.50		NIST Webbook
rinpol	2773.50		NIST Webbook
tb	879.14	K	Joback Method
tc	1076.77	K	Joback Method
tf	471.37	K	Joback Method
vc	1.448	m ³ /kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	1215.41	J/molxK	879.14	Joback Method
cpg	1236.55	J/molxK	912.08	Joback Method
cpg	1256.47	J/molxK	945.02	Joback Method
cpg	1275.22	J/molxK	977.96	Joback Method
cpg	1292.86	J/molxK	1010.89	Joback Method
cpg	1309.44	J/molxK	1043.83	Joback Method
cpg	1325.03	J/molxK	1076.77	Joback Method

dvisc	0.0010282	Paxs	471.37	Joback Method
dvisc	0.0004421	Paxs	539.33	Joback Method
dvisc	0.0002297	Paxs	607.29	Joback Method
dvisc	0.0001361	Paxs	675.25	Joback Method
dvisc	0.0000888	Paxs	743.22	Joback Method
dvisc	0.0000622	Paxs	811.18	Joback Method
dvisc	0.0000460	Paxs	879.14	Joback Method

Sources

McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C95605257&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

Legend

cp_g:	Ideal gas heat capacity
dvisc:	Dynamic viscosity
g_f:	Standard Gibbs free energy of formation
h_f:	Enthalpy of formation at standard conditions
h_{fus}:	Enthalpy of fusion at standard conditions
h_{vap}:	Enthalpy of vaporization at standard conditions
log₁₀ws:	Log ₁₀ of Water solubility in mol/l
log_p:	Octanol/Water partition coefficient
mc_{vol}:	McGowan's characteristic volume
pc:	Critical Pressure
rin_{pol}:	Non-polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume

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