Glutaric acid, decyl 1-naphthyl ester

Inchi: InChI=1S/C25H34O4/c1-2-3-4-5-6-7-8-11-20-28-24(26)18-13-19-25(27)29-23-17-12-15-2
InchiKey: IDAFAORKFHGAHX-UHFFFAOYSA-N
Formula: C25H34O4
SMILES: CCCCCCCCCCOC(=O)CCCC(=O)Oc1cccc2ccccc12
Mol. weight [g/mol]: 398.54

Physical Properties

Property code	Value	Unit	Source
gf	-98.79	kJ/mol	Joback Method
hf	-632.80	kJ/mol	Joback Method
hfus	56.75	kJ/mol	Joback Method
hvap	94.13	kJ/mol	Joback Method
log10ws	-7.89		Crippen Method
logp	6.599		Crippen Method
mcvol	334.770	ml/mol	McGowan Method
pc	1137.50	kPa	Joback Method
rinpol	3237.00		NIST Webbook
rinpol	3237.00		NIST Webbook
tb	974.62	K	Joback Method
tc	1194.68	K	Joback Method
tf	587.47	K	Joback Method
vc	1.298	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	1100.84	J/mol×K	974.62	Joback Method
cpg	1167.69	J/mol×K	1158.00	Joback Method
cpg	1156.45	J/mol×K	1121.33	Joback Method
cpg	1144.21	J/mol×K	1084.65	Joback Method
cpg	1130.91	J/mol×K	1047.97	Joback Method
cpg	1116.48	J/mol×K	1011.30	Joback Method
cpg	1178.00	J/mol×K	1194.68	Joback Method
dvisc	0.0000552	Pa×s	974.62	Joback Method

dvisc	0.0000690	Pa×s	910.10	Joback Method
dvisc	0.0000894	Pa×s	845.57	Joback Method
dvisc	0.0001209	Pa×s	781.05	Joback Method
dvisc	0.0001726	Pa×s	716.52	Joback Method
dvisc	0.0002642	Pa×s	652.00	Joback Method
dvisc	0.0004444	Pa×s	587.47	Joback Method

Sources

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
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=U358772&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l

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