Glutaric acid, 2-norbornyl 2,2-dichloroethyl ester

Inchi: InChI=1S/C14H20Cl2O4/c15-12(16)8-19-13(17)2-1-3-14(18)20-11-7-9-4-5-10(11)6-9/h9-

InchiKey: MSJQNNTYZJWUBW-UHFFFAOYSA-N

Formula: C14H20Cl2O4

SMILES: O=C(CCCC(=O)OC1CC2CCC1C2)OCC(Cl)Cl

Mol. weight [g/mol]: 323.21

Physical Properties

Property code	Value	Unit	Source
gf	-325.45	kJ/mol	Joback Method
hf	-739.55	kJ/mol	Joback Method
hfus	37.70	kJ/mol	Joback Method
hvap	73.14	kJ/mol	Joback Method
log10ws	-3.74		Crippen Method
logp	3.235		Crippen Method
mcvol	225.760	ml/mol	McGowan Method
pc	1916.94	kPa	Joback Method
rinpol	2161.00		NIST Webbook
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tb	759.80	K	Joback Method
tc	970.11	K	Joback Method
tf	464.82	K	Joback Method
vc	0.865	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	656.25	J/mol×K	759.80	Joback Method
cpg	722.65	J/mol×K	935.06	Joback Method
cpg	711.24	J/mol×K	900.01	Joback Method
cpg	698.94	J/mol×K	864.96	Joback Method
cpg	685.70	J/mol×K	829.90	Joback Method
cpg	671.49	J/mol×K	794.85	Joback Method
cpg	733.24	J/mol×K	970.11	Joback Method
dvisc	0.0006356	Pa×s	759.80	Joback Method

dvisc	0.0007406	Pa×s	710.64	Joback Method
dvisc	0.0008829	Pa×s	661.47	Joback Method
dvisc	0.0010825	Pa×s	612.31	Joback Method
dvisc	0.0013754	Pa×s	563.15	Joback Method
dvisc	0.0018296	Pa×s	513.98	Joback Method
dvisc	0.0025850	Pa×s	464.82	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=U405489&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