

Dipropyl glutarate

Other names:	dipropyl pentanedioate pentanedioic acid, 1,5-dipropyl ester pentanedioic acid, dipropyl ester
Inchi:	InChI=1S/C11H20O4/c1-3-8-14-10(12)6-5-7-11(13)15-9-4-2/h3-9H2,1-2H3
InchiKey:	IXAVSISAEGUDSL-UHFFFAOYSA-N
Formula:	C11H20O4
SMILES:	CCCOC(=O)CCCC(=O)OCCC
Mol. weight [g/mol]:	216.27
CAS:	1724-48-7

Physical Properties

Property code	Value	Unit	Source
gf	-426.10	kJ/mol	Joback Method
hf	-759.97	kJ/mol	Joback Method
hfus	29.82	kJ/mol	Joback Method
hvap	58.39	kJ/mol	Joback Method
log10ws	-2.15		Crippen Method
logp	2.063		Crippen Method
mcvol	180.730	ml/mol	McGowan Method
pc	2100.34	kPa	Joback Method
rinpol	1440.00		NIST Webbook
rinpol	1436.00		NIST Webbook
rinpol	1439.00		NIST Webbook
rinpol	1439.00		NIST Webbook
rinpol	1436.00		NIST Webbook
rinpol	1438.00		NIST Webbook
rinpol	1439.00		NIST Webbook
tb	603.66	K	Joback Method
tc	782.25	K	Joback Method
tf	358.05	K	Joback Method
vc	0.700	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	539.69	J/mol×K	782.25	Joback Method
cpg	478.94	J/mol×K	633.43	Joback Method
cpg	492.26	J/mol×K	663.19	Joback Method
cpg	505.00	J/mol×K	692.96	Joback Method
cpg	517.15	J/mol×K	722.72	Joback Method
cpg	528.71	J/mol×K	752.49	Joback Method
cpg	465.03	J/mol×K	603.66	Joback Method
dvisc	0.0002188	Pa×s	562.73	Joback Method
dvisc	0.0002926	Pa×s	521.79	Joback Method
dvisc	0.0004109	Pa×s	480.86	Joback Method
dvisc	0.0006149	Pa×s	439.92	Joback Method
dvisc	0.0009995	Pa×s	398.99	Joback Method
dvisc	0.0001703	Pa×s	603.66	Joback Method
dvisc	0.0018153	Pa×s	358.05	Joback Method
pvap	0.01	kPa	328.50	Vapor Pressures and Enthalpies of Vaporization of a Series of the Symmetric Linear n-Alkyl Esters of Dicarboxylic Acids
pvap	0.01	kPa	329.50	Vapor Pressures and Enthalpies of Vaporization of a Series of the Symmetric Linear n-Alkyl Esters of Dicarboxylic Acids
pvap	7.78e-03	kPa	325.40	Vapor Pressures and Enthalpies of Vaporization of a Series of the Symmetric Linear n-Alkyl Esters of Dicarboxylic Acids
pvap	0.01	kPa	333.60	Vapor Pressures and Enthalpies of Vaporization of a Series of the Symmetric Linear n-Alkyl Esters of Dicarboxylic Acids
pvap	0.02	kPa	336.40	Vapor Pressures and Enthalpies of Vaporization of a Series of the Symmetric Linear n-Alkyl Esters of Dicarboxylic Acids

pvap	0.02	kPa	338.50	Vapor Pressures and Enthalpies of Vaporization of a Series of the Symmetric Linear n-Alkyl Esters of Dicarboxylic Acids
pvap	0.03	kPa	341.40	Vapor Pressures and Enthalpies of Vaporization of a Series of the Symmetric Linear n-Alkyl Esters of Dicarboxylic Acids
pvap	0.03	kPa	343.60	Vapor Pressures and Enthalpies of Vaporization of a Series of the Symmetric Linear n-Alkyl Esters of Dicarboxylic Acids
pvap	0.04	kPa	346.40	Vapor Pressures and Enthalpies of Vaporization of a Series of the Symmetric Linear n-Alkyl Esters of Dicarboxylic Acids
pvap	0.04	kPa	348.40	Vapor Pressures and Enthalpies of Vaporization of a Series of the Symmetric Linear n-Alkyl Esters of Dicarboxylic Acids
pvap	0.05	kPa	350.50	Vapor Pressures and Enthalpies of Vaporization of a Series of the Symmetric Linear n-Alkyl Esters of Dicarboxylic Acids
pvap	0.06	kPa	353.50	Vapor Pressures and Enthalpies of Vaporization of a Series of the Symmetric Linear n-Alkyl Esters of Dicarboxylic Acids

pvap	6.37e-03	kPa	323.50	Vapor Pressures and Enthalpies of Vaporization of a Series of the Symmetric Linear n-Alkyl Esters of Dicarboxylic Acids
pvap	6.09e-03	kPa	322.50	Vapor Pressures and Enthalpies of Vaporization of a Series of the Symmetric Linear n-Alkyl Esters of Dicarboxylic Acids
pvap	4.78e-03	kPa	319.40	Vapor Pressures and Enthalpies of Vaporization of a Series of the Symmetric Linear n-Alkyl Esters of Dicarboxylic Acids
pvap	4.44e-03	kPa	318.50	Vapor Pressures and Enthalpies of Vaporization of a Series of the Symmetric Linear n-Alkyl Esters of Dicarboxylic Acids
pvap	3.59e-03	kPa	316.40	Vapor Pressures and Enthalpies of Vaporization of a Series of the Symmetric Linear n-Alkyl Esters of Dicarboxylic Acids
pvap	2.76e-03	kPa	313.30	Vapor Pressures and Enthalpies of Vaporization of a Series of the Symmetric Linear n-Alkyl Esters of Dicarboxylic Acids
pvap	0.01	kPa	331.40	Vapor Pressures and Enthalpies of Vaporization of a Series of the Symmetric Linear n-Alkyl Esters of Dicarboxylic Acids

Sources

McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C1724487&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws
Vapor Pressures and Enthalpies of Vaporization of a Series of the Symmetric Linear n-Alkyl Esters of Dicarboxylic Acids:	https://www.doi.org/10.1021/je100231g
Joback Method:	https://en.wikipedia.org/wiki/Joback_method

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

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