2,4-Dimethyl-1,3-dioxole

Inchi: InChI=1S/C5H8O2/c1-4-3-6-5(2)7-4/h3,5H,1-2H3
InchiKey: IVURCTIAWLTXML-UHFFFAOYSA-N
Formula: C5H8O2
SMILES: CC1=COC(C)O1
Mol. weight [g/mol]: 100.12
CAS: 14738-97-7

Physical Properties

Property code	Value	Unit	Source
chl	-2653.00 ± 3.00	kJ/mol	NIST Webbook
chl	-2652.30 ± 1.10	kJ/mol	NIST Webbook
gf	-124.14	kJ/mol	Joback Method
hf	-423.00 ± 4.00	kJ/mol	NIST Webbook
hfl	-458.00 ± 3.00	kJ/mol	NIST Webbook
hfus	19.43	kJ/mol	Joback Method
hvap	35.00	kJ/mol	NIST Webbook
hvap	35.00 ± 1.00	kJ/mol	NIST Webbook
log10ws	-1.44		Crippen Method
logp	1.240		Crippen Method
mcvol	77.890	ml/mol	McGowan Method
pc	4356.87	kPa	Joback Method
tb	387.12	K	Joback Method
tc	589.40	K	Joback Method
tf	223.43	K	Joback Method
vc	0.284	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	146.61	J/mol×K	387.12	Joback Method
cpg	156.62	J/mol×K	420.83	Joback Method
cpg	166.16	J/mol×K	454.55	Joback Method
cpg	175.24	J/mol×K	488.26	Joback Method
cpg	183.88	J/mol×K	521.97	Joback Method

cpg	192.09	J/mol×K	555.68	Joback Method
cpg	199.88	J/mol×K	589.40	Joback Method
dvisc	0.0024588	Pa×s	223.43	Joback Method
dvisc	0.0015116	Pa×s	250.71	Joback Method
dvisc	0.0010225	Pa×s	277.99	Joback Method
dvisc	0.0007416	Pa×s	305.27	Joback Method
dvisc	0.0005670	Pa×s	332.56	Joback Method
dvisc	0.0004516	Pa×s	359.84	Joback Method
dvisc	0.0003713	Pa×s	387.12	Joback Method

Sources

McGowan Method: http://link.springer.com/article/10.1007/BF02311772
NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C14738977&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

chl: Standard liquid enthalpy of combustion
cpg: Ideal gas heat capacity
dvisc: Dynamic viscosity
gf: Standard Gibbs free energy of formation
hf: Enthalpy of formation at standard conditions
hfl: Liquid phase 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
tb: Normal Boiling Point Temperature
tc: Critical Temperature
tf: Normal melting (fusion) point
vc: Critical Volume

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