1,3-Dioxolane, 2-heptyl-

Other names: 2-heptyl-1,3-dioxolane
Inchi: InChI=1S/C10H20O2/c1-2-3-4-5-6-7-10-11-8-9-12-10/h10H,2-9H2,1H3
InchiKey: LWJBQKKNODYJEI-UHFFFAOYSA-N
Formula: C10H20O2
SMILES: CCCCCCCC1OCCO1
Mol. weight [g/mol]: 172.26
CAS: 4359-57-3

Physical Properties

Property code	Value	Unit	Source
gf	-102.37	kJ/mol	Joback Method
hf	-453.25	kJ/mol	Joback Method
hfus	31.55	kJ/mol	Joback Method
hvap	47.13	kJ/mol	Joback Method
log10ws	-2.68		Crippen Method
logp	2.720		Crippen Method
mcvol	152.640	ml/mol	McGowan Method
pc	2460.47	kPa	Joback Method
tb	497.38	K	Joback Method
tc	686.16	K	Joback Method
tf	266.50	K	Joback Method
vc	0.579	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	367.54	J/mol×K	497.38	Joback Method
cpg	384.72	J/mol×K	528.84	Joback Method
cpg	401.09	J/mol×K	560.31	Joback Method
cpg	416.65	J/mol×K	591.77	Joback Method
cpg	431.45	J/mol×K	623.23	Joback Method
cpg	445.50	J/mol×K	654.70	Joback Method
cpg	458.83	J/mol×K	686.16	Joback Method
dvisc	0.0057959	Pa×s	266.50	Joback Method

dvisc	0.0026959	Pa×s	304.98	Joback Method
dvisc	0.0014886	Pa×s	343.46	Joback Method
dvisc	0.0009265	Pa×s	381.94	Joback Method
dvisc	0.0006289	Pa×s	420.42	Joback Method
dvisc	0.0004556	Pa×s	458.90	Joback Method
dvisc	0.0003469	Pa×s	497.38	Joback Method
hvapt	62.00	kJ/mol	385.50	NIST Webbook

Sources

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=C4359573&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws

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
hvapt:	Enthalpy of vaporization at a given temperature
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