1-Decanol, 2,2-dimethyl-

Other names: 1-Hydroxy-2,2-dimethyldecane
2,2-Dimethyl-1-decanol
Inchi: InChI=1S/C12H26O/c1-4-5-6-7-8-9-10-12(2,3)11-13/h13H,4-11H2,1-3H3
InchiKey: OSJLCOMCKUOKDD-UHFFFAOYSA-N
Formula: C12H26O
SMILES: CCCCCCCCC(C)(C)CO
Mol. weight [g/mol]: 186.33
CAS: 2370-15-2

Physical Properties

Property code	Value	Unit	Source
gf	-83.82	kJ/mol	Joback Method
hf	-451.99	kJ/mol	Joback Method
hfus	23.51	kJ/mol	Joback Method
hvap	57.69	kJ/mol	Joback Method
log10ws	-3.87		Crippen Method
logp	3.756		Crippen Method
mcvol	185.810	ml/mol	McGowan Method
pc	1959.60	kPa	Joback Method
ripol	1911.00		NIST Webbook
ripol	1911.00		NIST Webbook
tb	517.15 ± 4.00	K	NIST Webbook
tc	727.78	K	Joback Method
tf	288.24	K	Joback Method
vc	0.716	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	481.31	J/mol×K	562.91	Joback Method
cpg	551.37	J/mol×K	700.30	Joback Method
cpg	538.62	J/mol×K	672.83	Joback Method
cpg	525.27	J/mol×K	645.35	Joback Method
cpg	511.28	J/mol×K	617.87	Joback Method

cpg	496.64	J/mol×K	590.39	Joback Method
cpg	563.54	J/mol×K	727.78	Joback Method
dvisc	0.0000801	Pa×s	562.91	Joback Method
dvisc	0.0001367	Pa×s	517.13	Joback Method
dvisc	0.0002589	Pa×s	471.35	Joback Method
dvisc	0.0005625	Pa×s	425.57	Joback Method
dvisc	0.0014737	Pa×s	379.80	Joback Method
dvisc	0.0050272	Pa×s	334.02	Joback Method
dvisc	0.0253239	Pa×s	288.24	Joback Method

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=C2370152&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
log10ws:	Log10 of Water solubility in mol/l
logp:	Octanol/Water partition coefficient
mcvol:	McGowan's characteristic volume
pc:	Critical Pressure
ripol:	Polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume