2-Propanol, 1-(2-butoxy-1-methylethoxy)-

Other names:	1-(2-butoxy-1-methylethoxy)-2-propanol
	1-(2-butoxy-1-methylethoxy)propan-2-ol
	2-Propanol, 1-(2-butoxy-1-methoxy)-
	Dipropylene glycol n-butyl ether
	Dipropylene glycol, butyl ether
	Dowanol DPnB
Inchi:	InChI=1S/C10H22O3/c1-4-5-6-12-8-10(3)13-7-9(2)11/h9-11H,4-8H2,1-3H3
InchiKey:	CUVLMZNMSPJDON-UHFFFAOYSA-N
Formula:	C10H22O3
SMILES:	CCCCOCC(C)OCC(C)O
Mol. weight [g/mol]:	190.28
CAS:	29911-28-2

Physical Properties

Property code	Value	Unit	Source
gf	-318.38	kJ/mol	Joback Method
hf	-676.96	kJ/mol	Joback Method
hfus	21.07	kJ/mol	Joback Method
hvap	58.58	kJ/mol	Joback Method
log10ws	-1.67		Crippen Method
logp	1.589		Crippen Method
mcvol	169.370	ml/mol	McGowan Method
pc	2258.96	kPa	Joback Method
tb	564.34	K	Joback Method
tc	728.46	K	Joback Method
tf	277.74	K	Joback Method
vc	0.638	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	434.11	J/mol×K	564.34	Joback Method
cpg	507.80	J/mol×K	728.46	Joback Method
cpg	496.72	J/mol×K	701.11	Joback Method

cpg	485.16	J/mol×K	673.76	Joback Method
cpg	473.12	J/mol×K	646.40	Joback Method
cpg	460.60	J/mol×K	619.05	Joback Method
cpg	447.59	J/mol×K	591.69	Joback Method
cpl	403.90	J/mol×K	275.15	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.
cpl	438.70	J/mol×K	330.65	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.
cpl	439.60	J/mol×K	332.15	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.
cpl	440.50	J/mol×K	333.65	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.
cpl	441.40	J/mol×K	335.15	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.
cpl	442.40	J/mol×K	336.65	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.
cpl	443.30	J/mol×K	338.15	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.
cpl	437.80	J/mol×K	329.15	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.

cpl	404.90	J/mol×K	276.65	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.	
cpl	405.90	J/mol×K	278.15	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.	
cpl	406.80	J/mol×K	279.65	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.	
cpl	407.80	J/mol×K	281.15	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.	
cpl	408.70	J/mol×K	282.65	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.	
cpl	409.70	J/mol×K	284.15	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.	
cpl	410.60	J/mol×K	285.65	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.	
cpl	411.60	J/mol×K	287.15	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.	
cpl	412.60	J/mol×K	288.65	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.	

cpl	413.50	J/mol×K	290.15	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.	
cpl	414.50	J/mol×K	291.65	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.	
cpl	415.40	J/mol×K	293.15	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.	
cpl	416.40	J/mol×K	294.65	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.	
cpl	417.30	J/mol×K	296.15	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.	
cpl	436.00	J/mol×K	326.15	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.	
cpl	418.60	J/mol×K	298.15	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.	
cpl	419.20	J/mol×K	299.15	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.	

cpl	420.10	J/mol×K	300.65	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.	
cpl	421.10	J/mol×K	302.15	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.	
cpl	422.00	J/mol×K	303.65	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.	
cpl	423.00	J/mol×K	305.15	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.	
cpl	423.90	J/mol×K	306.65	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.	
cpl	424.80	J/mol×K	308.15	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.	
cpl	425.80	J/mol×K	309.65	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.	
cpl	426.70	J/mol×K	311.15	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.	
cpl	427.60	J/mol×K	312.65	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.	

cpl	428.60	J/mol×K	314.15	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.	
cpl	429.50	J/mol×K	315.65	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.	
cpl	430.40	J/mol×K	317.15	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.	
cpl	431.30	J/mol×K	318.65	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.	
cpl	432.30	J/mol×K	320.15	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.	
cpl	433.20	J/mol×K	321.65	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.	
cpl	434.10	J/mol×K	323.15	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.	
cpl	435.00	J/mol×K	324.65	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.	

cpl	418.30	J/mol×K	297.65	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.	
cpl	436.90	J/mol×K	327.65	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.	
cpl	443.90	J/mol×K	339.15	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.	
dvisc	0.0000596	Pa×s	564.34	Joback Method	
dvisc	0.0001022	Pa×s	516.57	Joback Method	
dvisc	0.0001956	Pa×s	468.81	Joback Method	
dvisc	0.0004337	Pa×s	421.04	Joback Method	
dvisc	0.0011795	Pa×s	373.27	Joback Method	
dvisc	0.0043018	Pa×s	325.51	Joback Method	
dvisc	0.0244859	Pa×s	277.74	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=C29911282&Units=SI

Crippen Method: http://pubs.acs.org/doi/abs/10.1021/ci990307l

Crippen Method: https://www.chemeo.com/doc/models/crippen_log10ws

Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction. https://www.doi.org/10.1016/j.fluid.2016.09.002

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Legend

cpg:	Ideal gas heat capacity
cpl:	Liquid phase 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
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume