

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/molxK	564.34	Joback Method
cpg	447.59	J/molxK	591.69	Joback Method
cpg	460.60	J/molxK	619.05	Joback Method

cpg	473.12	J/mol×K	646.40	Joback Method
cpg	485.16	J/mol×K	673.76	Joback Method
cpg	496.72	J/mol×K	701.11	Joback Method
cpg	507.80	J/mol×K	728.46	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	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	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	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	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	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	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	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.
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	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	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.
dvisc	0.0244859	Paxs	277.74	Joback Method
dvisc	0.0043018	Paxs	325.51	Joback Method
dvisc	0.0011795	Paxs	373.27	Joback Method
dvisc	0.0004337	Paxs	421.04	Joback Method
dvisc	0.0001956	Paxs	468.81	Joback Method
dvisc	0.0001022	Paxs	516.57	Joback Method
dvisc	0.0000596	Paxs	564.34	Joback Method

Sources

NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C29911282&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci9903071
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
Mutual Solubilities and Lower-Critical Solution Temperature for Water + Organic Systems:	https://www.doi.org/10.1021/je049635u
Joback Method:	https://en.wikipedia.org/wiki/Joback_method
McGowan Method:	http://link.springer.com/article/10.1007/BF02311772

Legend

cp_g:	Ideal gas heat capacity
cp_l:	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

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