

# Propane, 1,2-dimethoxy-

<b>Other names:</b>	1,2-dimethoxypropane 2,2-Dimethoxy propane Propylene glycol dimethyl ether glyme (propylene glycol dimethyl ether)
<b>Inchi:</b>	InChI=1S/C5H12O2/c1-5(7-3)4-6-2/h5H,4H2,1-3H3
<b>InchiKey:</b>	LEEANUDEDHYDTG-UHFFFAOYSA-N
<b>Formula:</b>	C5H12O2
<b>SMILES:</b>	COCC(C)OC
<b>Mol. weight [g/mol]:</b>	104.15
<b>CAS:</b>	7778-85-0

## Physical Properties

Property code	Value	Unit	Source
gf	-221.22	kJ/mol	Joback Method
hf	-416.25	kJ/mol	Joback Method
hfus	7.56	kJ/mol	Joback Method
hvap	31.16	kJ/mol	Joback Method
log10ws	-0.20		Crippen Method
logp	0.668		Crippen Method
mcvol	93.050	ml/mol	McGowan Method
pc	3364.54	kPa	Joback Method
tb	369.20	K	NIST Webbook
tc	527.59	K	Joback Method
tf	175.57	K	Joback Method
vc	0.345	m3/kmol	Joback Method

## Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	169.41	J/molxK	358.20	Joback Method
cpg	178.19	J/molxK	386.43	Joback Method
cpg	186.80	J/molxK	414.66	Joback Method
cpg	195.24	J/molxK	442.89	Joback Method
cpg	203.50	J/molxK	471.12	Joback Method

cpg	211.58	J/mol×K	499.35	Joback Method
cpg	219.47	J/mol×K	527.59	Joback Method
cpl	210.90	J/mol×K	275.15	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.
cpl	211.30	J/mol×K	276.65	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.
cpl	211.60	J/mol×K	278.15	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.
cpl	212.00	J/mol×K	279.65	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.
cpl	212.30	J/mol×K	281.15	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.
cpl	212.70	J/mol×K	282.65	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.
cpl	213.10	J/mol×K	284.15	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.
cpl	213.40	J/mol×K	285.65	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.

cpl	213.80	J/mol×K	287.15	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.
cpl	214.10	J/mol×K	288.65	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.
cpl	214.50	J/mol×K	290.15	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.
cpl	214.90	J/mol×K	291.65	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.
cpl	215.20	J/mol×K	293.15	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.
cpl	215.60	J/mol×K	294.65	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.
cpl	216.00	J/mol×K	296.15	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.
cpl	216.30	J/mol×K	297.65	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.
cpl	216.50	J/mol×K	298.15	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.

cpl	216.70	J/mol×K	299.15	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.
cpl	217.10	J/mol×K	300.65	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.
cpl	217.40	J/mol×K	302.15	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.
cpl	217.80	J/mol×K	303.65	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.
cpl	218.20	J/mol×K	305.15	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.
cpl	226.10	J/mol×K	336.65	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.
cpl	218.90	J/mol×K	308.15	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.
cpl	219.30	J/mol×K	309.65	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.

cpl	219.70	J/mol×K	311.15	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.
cpl	220.00	J/mol×K	312.65	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.
cpl	220.40	J/mol×K	314.15	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.
cpl	220.80	J/mol×K	315.65	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.
cpl	221.20	J/mol×K	317.15	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.
cpl	221.50	J/mol×K	318.65	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.
cpl	221.90	J/mol×K	320.15	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.
cpl	222.30	J/mol×K	321.65	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.
cpl	222.70	J/mol×K	323.15	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.

cpl	223.00	J/mol×K	324.65	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.
cpl	223.40	J/mol×K	326.15	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.
cpl	223.80	J/mol×K	327.65	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.
cpl	226.70	J/mol×K	339.15	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.
cpl	224.50	J/mol×K	330.65	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.
cpl	224.90	J/mol×K	332.15	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.
cpl	225.30	J/mol×K	333.65	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.
cpl	225.70	J/mol×K	335.15	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.

cpl	218.50	J/mol×K	306.65	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.
cpl	226.40	J/mol×K	338.15	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.
cpl	224.20	J/mol×K	329.15	Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.
dvisc	0.0043341	Paxs	175.57	Joback Method
dvisc	0.0017713	Paxs	206.01	Joback Method
dvisc	0.0009115	Paxs	236.45	Joback Method
dvisc	0.0005458	Paxs	266.88	Joback Method
dvisc	0.0003630	Paxs	297.32	Joback Method
dvisc	0.0002604	Paxs	327.76	Joback Method
dvisc	0.0001977	Paxs	358.20	Joback Method

## Sources

<b>Joback Method:</b>	<a href="https://en.wikipedia.org/wiki/Joback_method">https://en.wikipedia.org/wiki/Joback_method</a>
<b>McGowan Method:</b>	<a href="http://link.springer.com/article/10.1007/BF02311772">http://link.springer.com/article/10.1007/BF02311772</a>
<b>NIST Webbook:</b>	<a href="http://webbook.nist.gov/cgi/cbook.cgi?ID=C7778850&amp;Units=SI">http://webbook.nist.gov/cgi/cbook.cgi?ID=C7778850&amp;Units=SI</a>
<b>Crippen Method:</b>	<a href="http://pubs.acs.org/doi/abs/10.1021/ci9903071">http://pubs.acs.org/doi/abs/10.1021/ci9903071</a>
<b>Crippen Method:</b>	<a href="https://www.chemeo.com/doc/models/crippen_log10ws">https://www.chemeo.com/doc/models/crippen_log10ws</a>
<b>Heat capacity of dowanols within a temperature range of (275.15 to 339.15) K. Measurements and prediction.:</b>	<a href="https://www.doi.org/10.1016/j.fluid.2016.09.002">https://www.doi.org/10.1016/j.fluid.2016.09.002</a>

## Legend

<b>cpg:</b>	Ideal gas heat capacity
<b>cpl:</b>	Liquid phase heat capacity
<b>dvisc:</b>	Dynamic viscosity
<b>gf:</b>	Standard Gibbs free energy of formation
<b>hf:</b>	Enthalpy of formation at standard conditions

<b>hfus:</b>	Enthalpy of fusion at standard conditions
<b>hvap:</b>	Enthalpy of vaporization at standard conditions
<b>log10ws:</b>	Log10 of Water solubility in mol/l
<b>logp:</b>	Octanol/Water partition coefficient
<b>mcvol:</b>	McGowan's characteristic volume
<b>pc:</b>	Critical Pressure
<b>tb:</b>	Normal Boiling Point Temperature
<b>tc:</b>	Critical Temperature
<b>tf:</b>	Normal melting (fusion) point
<b>vc:</b>	Critical Volume

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