

Decanal dimethyl acetal

Other names:	Decylaldehyde dimethylacetal Decane, 1,1-dimethoxy- 1,1-Dimethoxydecane Aldehyde C-10 dimethylacetal Decylaldehyde dma n-Decanal dimethyl acetal
Inchi:	InChI=1S/C12H26O2/c1-4-5-6-7-8-9-10-11-12(13-2)14-3/h12H,4-11H2,1-3H3
InchiKey:	NCRNCSZWOOYBQF-UHFFFAOYSA-N
Formula:	C12H26O2
SMILES:	CCCCCCCCCCC(OC)OC
Mol. weight [g/mol]:	202.33
CAS:	7779-41-1

Physical Properties

Property code	Value	Unit	Source
gf	-162.28	kJ/mol	Joback Method
hf	-560.73	kJ/mol	Joback Method
hfus	25.69	kJ/mol	Joback Method
hvap	46.74	kJ/mol	Joback Method
log10ws	-3.63		Crippen Method
logp	3.746		Crippen Method
mcvol	191.680	ml/mol	McGowan Method
pc	1741.91	kPa	Joback Method
rinpol	1366.00		NIST Webbook
ripol	1567.00		NIST Webbook
ripol	1567.00		NIST Webbook
tb	518.36	K	Joback Method
tc	682.34	K	Joback Method
tf	254.46	K	Joback Method
vc	0.738	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
---------------	-------	------	-----------------	--------

cpg	464.54	J/mol×K	518.36	Joback Method
cpg	481.08	J/mol×K	545.69	Joback Method
cpg	497.06	J/mol×K	573.02	Joback Method
cpg	512.48	J/mol×K	600.35	Joback Method
cpg	527.34	J/mol×K	627.68	Joback Method
cpg	541.66	J/mol×K	655.01	Joback Method
cpg	555.42	J/mol×K	682.34	Joback Method
dvisc	0.0042647	Pa×s	254.46	Joback Method
dvisc	0.0015728	Pa×s	298.44	Joback Method
dvisc	0.0007494	Pa×s	342.43	Joback Method
dvisc	0.0004228	Pa×s	386.41	Joback Method
dvisc	0.0002681	Pa×s	430.39	Joback Method
dvisc	0.0001850	Pa×s	474.38	Joback Method
dvisc	0.0001359	Pa×s	518.36	Joback Method

Sources

NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C7779411&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws
Joback Method:	https://en.wikipedia.org/wiki/Joback_method
McGowan Method:	http://link.springer.com/article/10.1007/BF02311772

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
mccvol:	McGowan's characteristic volume
pc:	Critical Pressure
rinpol:	Non-polar retention indices
ripol:	Polar retention indices
tb:	Normal Boiling Point Temperature

tc: Critical Temperature
tf: Normal melting (fusion) point
vc: Critical Volume

Latest version available from:

<https://www.chemeo.com/cid/85-260-9/Decanal-dimethyl-acetal.pdf>

Generated by Cheméo on 2025-12-24 00:35:48.239220766 +0000 UTC m=+6284745.769261421.

Cheméo (<https://www.chemeo.com>) is the biggest free database of chemical and physical data for the process industry.