

Dodecane, 1,1'-oxybis-

Other names:	Dodecyl ether Didodecyl ether Dilauryl ether 1,1'-oxybisdodecane 13-Oxapentacosane
Inchi:	InChI=1S/C24H50O/c1-3-5-7-9-11-13-15-17-19-21-23-25-24-22-20-18-16-14-12-10-8-6-4
InchiKey:	CMCBDXRRFKYBDG-UHFFFAOYSA-N
Formula:	C24H50O
SMILES:	CCCCCCCCCCCCOCCCCCCCCCCCCC
Mol. weight [g/mol]:	354.65
CAS:	4542-57-8

Physical Properties

Property code	Value	Unit	Source
gf	46.20	kJ/mol	Joback Method
hf	-670.91	kJ/mol	Joback Method
hfus	59.10	kJ/mol	Joback Method
hvap	71.43	kJ/mol	Joback Method
log10ws	-8.96		Crippen Method
logp	8.845		Crippen Method
mcvol	354.890	ml/mol	McGowan Method
pc	798.43	kPa	Joback Method
tb	770.94	K	Joback Method
tc	944.39	K	Joback Method
tf	305.15 ± 2.00	K	NIST Webbook
vc	1.397	m ³ /kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	1244.48	J/mol×K	944.39	Joback Method
cpg	1123.31	J/mol×K	770.94	Joback Method
cpg	1146.09	J/mol×K	799.85	Joback Method
cpg	1167.79	J/mol×K	828.76	Joback Method

cpg	1188.45	J/mol×K	857.67	Joback Method
cpg	1208.10	J/mol×K	886.57	Joback Method
cpg	1226.77	J/mol×K	915.48	Joback Method
dvisc	0.0000436	Paxs	770.94	Joback Method
dvisc	0.0015134	Paxs	382.47	Joback Method
dvisc	0.0005462	Paxs	447.22	Joback Method
dvisc	0.0002551	Paxs	511.96	Joback Method
dvisc	0.0001413	Paxs	576.70	Joback Method
dvisc	0.0000882	Paxs	641.45	Joback Method
dvisc	0.0000601	Paxs	706.19	Joback Method
hfust	92.88	kJ/mol	304.62	NIST Webbook

Sources

Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci9903071
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
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C4542578&Units=SI

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
hfust:	Enthalpy of fusion at a given temperature
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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