

Tetraethyleneglycol monomethylether

Other names:	2,5,8,11-Tetraoxatridecan-13-ol 2-[2-[2-(2-Methoxyethoxy)ethoxy]ethoxy]ethanol 3,6,9,12-Tetraoxatridecan-1-ol 3,6,9,12-tetraoxatridecanol 3,6,9,12-tetraoxotridecanol tetraethylene glycol monomethyl ether
Inchi:	InChI=1S/C9H20O5/c1-11-4-5-13-8-9-14-7-6-12-3-2-10/h10H,2-9H2,1H3
InchiKey:	ZNYRFEPBTVGZDN-UHFFFAOYSA-N
Formula:	C9H20O5
SMILES:	COCCOCCOCCOCCO
Mol. weight [g/mol]:	208.25
CAS:	23783-42-8

Physical Properties

Property code	Value	Unit	Source
gf	-531.92	kJ/mol	Joback Method
hf	-910.20	kJ/mol	Joback Method
hfus	27.91	kJ/mol	Joback Method
hvap	61.95	kJ/mol	Joback Method
log10ws	0.80		Crippen Method
logp	-0.325		Crippen Method
mcvol	167.020	ml/mol	McGowan Method
pc	2361.07	kPa	Joback Method
rinpol	1413.00		NIST Webbook
rinpol	1416.00		NIST Webbook
rinpol	1413.00		NIST Webbook
tb	557.00 ± 3.00	K	NIST Webbook
tc	747.18	K	Joback Method
tf	340.93	K	Joback Method
vc	0.630	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
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cpg	436.83	J/mol×K	587.18	Joback Method
cpg	448.95	J/mol×K	613.85	Joback Method
cpg	460.70	J/mol×K	640.51	Joback Method
cpg	472.06	J/mol×K	667.18	Joback Method
cpg	483.03	J/mol×K	693.84	Joback Method
cpg	493.59	J/mol×K	720.51	Joback Method
cpg	503.72	J/mol×K	747.18	Joback Method
cpl	459.40	J/mol×K	337.15	Measurement and Prediction of Molar Heat Capacities of Liquid Polyoxyethylene Glycol Monoalkyl Ethers (CnEm)
cpl	445.60	J/mol×K	277.15	Measurement and Prediction of Molar Heat Capacities of Liquid Polyoxyethylene Glycol Monoalkyl Ethers (CnEm)
cpl	445.80	J/mol×K	279.15	Measurement and Prediction of Molar Heat Capacities of Liquid Polyoxyethylene Glycol Monoalkyl Ethers (CnEm)
cpl	446.00	J/mol×K	281.15	Measurement and Prediction of Molar Heat Capacities of Liquid Polyoxyethylene Glycol Monoalkyl Ethers (CnEm)
cpl	446.20	J/mol×K	283.15	Measurement and Prediction of Molar Heat Capacities of Liquid Polyoxyethylene Glycol Monoalkyl Ethers (CnEm)
cpl	446.50	J/mol×K	285.15	Measurement and Prediction of Molar Heat Capacities of Liquid Polyoxyethylene Glycol Monoalkyl Ethers (CnEm)

cpl	446.80	J/mol×K	287.15	Measurement and Prediction of Molar Heat Capacities of Liquid Polyoxyethylene Glycol Monoalkyl Ethers (CnEm)
cpl	447.10	J/mol×K	289.15	Measurement and Prediction of Molar Heat Capacities of Liquid Polyoxyethylene Glycol Monoalkyl Ethers (CnEm)
cpl	447.40	J/mol×K	291.15	Measurement and Prediction of Molar Heat Capacities of Liquid Polyoxyethylene Glycol Monoalkyl Ethers (CnEm)
cpl	447.70	J/mol×K	293.15	Measurement and Prediction of Molar Heat Capacities of Liquid Polyoxyethylene Glycol Monoalkyl Ethers (CnEm)
cpl	448.10	J/mol×K	295.15	Measurement and Prediction of Molar Heat Capacities of Liquid Polyoxyethylene Glycol Monoalkyl Ethers (CnEm)
cpl	448.40	J/mol×K	297.15	Measurement and Prediction of Molar Heat Capacities of Liquid Polyoxyethylene Glycol Monoalkyl Ethers (CnEm)
cpl	448.60	J/mol×K	298.15	Measurement and Prediction of Molar Heat Capacities of Liquid Polyoxyethylene Glycol Monoalkyl Ethers (CnEm)

cpl	448.80	J/mol×K	299.15	Measurement and Prediction of Molar Heat Capacities of Liquid Polyoxyethylene Glycol Monoalkyl Ethers (CnEm)
cpl	449.20	J/mol×K	301.15	Measurement and Prediction of Molar Heat Capacities of Liquid Polyoxyethylene Glycol Monoalkyl Ethers (CnEm)
cpl	449.60	J/mol×K	303.15	Measurement and Prediction of Molar Heat Capacities of Liquid Polyoxyethylene Glycol Monoalkyl Ethers (CnEm)
cpl	450.00	J/mol×K	305.15	Measurement and Prediction of Molar Heat Capacities of Liquid Polyoxyethylene Glycol Monoalkyl Ethers (CnEm)
cpl	445.40	J/mol×K	275.15	Measurement and Prediction of Molar Heat Capacities of Liquid Polyoxyethylene Glycol Monoalkyl Ethers (CnEm)
cpl	451.00	J/mol×K	309.15	Measurement and Prediction of Molar Heat Capacities of Liquid Polyoxyethylene Glycol Monoalkyl Ethers (CnEm)
cpl	451.50	J/mol×K	311.15	Measurement and Prediction of Molar Heat Capacities of Liquid Polyoxyethylene Glycol Monoalkyl Ethers (CnEm)

cpl	452.00	J/mol×K	313.15	Measurement and Prediction of Molar Heat Capacities of Liquid Polyoxyethylene Glycol Monoalkyl Ethers (CnEm)
cpl	452.50	J/mol×K	315.15	Measurement and Prediction of Molar Heat Capacities of Liquid Polyoxyethylene Glycol Monoalkyl Ethers (CnEm)
cpl	453.00	J/mol×K	317.15	Measurement and Prediction of Molar Heat Capacities of Liquid Polyoxyethylene Glycol Monoalkyl Ethers (CnEm)
cpl	453.60	J/mol×K	319.15	Measurement and Prediction of Molar Heat Capacities of Liquid Polyoxyethylene Glycol Monoalkyl Ethers (CnEm)
cpl	454.20	J/mol×K	321.15	Measurement and Prediction of Molar Heat Capacities of Liquid Polyoxyethylene Glycol Monoalkyl Ethers (CnEm)
cpl	454.80	J/mol×K	323.15	Measurement and Prediction of Molar Heat Capacities of Liquid Polyoxyethylene Glycol Monoalkyl Ethers (CnEm)
cpl	455.40	J/mol×K	325.15	Measurement and Prediction of Molar Heat Capacities of Liquid Polyoxyethylene Glycol Monoalkyl Ethers (CnEm)

cpl	456.00	J/mol×K	327.15	Measurement and Prediction of Molar Heat Capacities of Liquid Polyoxyethylene Glycol Monoalkyl Ethers (CnEm)
cpl	456.60	J/mol×K	329.15	Measurement and Prediction of Molar Heat Capacities of Liquid Polyoxyethylene Glycol Monoalkyl Ethers (CnEm)
cpl	457.30	J/mol×K	331.15	Measurement and Prediction of Molar Heat Capacities of Liquid Polyoxyethylene Glycol Monoalkyl Ethers (CnEm)
cpl	458.00	J/mol×K	333.15	Measurement and Prediction of Molar Heat Capacities of Liquid Polyoxyethylene Glycol Monoalkyl Ethers (CnEm)
cpl	458.70	J/mol×K	335.15	Measurement and Prediction of Molar Heat Capacities of Liquid Polyoxyethylene Glycol Monoalkyl Ethers (CnEm)
cpl	450.50	J/mol×K	307.15	Measurement and Prediction of Molar Heat Capacities of Liquid Polyoxyethylene Glycol Monoalkyl Ethers (CnEm)
cpl	460.10	J/mol×K	339.15	Measurement and Prediction of Molar Heat Capacities of Liquid Polyoxyethylene Glycol Monoalkyl Ethers (CnEm)
dvisc	0.0000435	Paxs	587.18	Joback Method
dvisc	0.0009458	Paxs	381.97	Joback Method
dvisc	0.0004022	Paxs	423.01	Joback Method
dvisc	0.0001990	Paxs	464.06	Joback Method
dvisc	0.0001104	Paxs	505.10	Joback Method

dvisc	0.0000669	Paxs	546.14	Joback Method
dvisc	0.0027319	Paxs	340.93	Joback Method

Sources

Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws
Measurement and Prediction of Molar Heat Capacities of Liquid Polyalkylene Glycol Monoalkyl Ethers (CnEm):	https://www.doi.org/10.1021/acs.jced.5b00051
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=C23783428&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l

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
rinpolar:	Non-polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume

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