

Hexaethylene glycol

Other names:

2-[2-[2-[2-[2-(2-Hydroxyethoxy)ethoxy]ethoxy]ethoxy]ethoxy]ethanol
3,6,9,12,15-pentaoxaheptadecane-1,17-diol
Ethanol, 2,2'-(oxybis(ethyleneoxyethyleneoxy))di-
Ethanol, 2,2'-(oxybis(oxy-2,1-ethanedioxy-2,1-ethanedioxy))bis-
Hexagol
Hexaoxyethylene glycol
NSC 201209
PEG-6
Polyethylene glycol 300
Polyoxyethylene (6)
ethanol, 2,2'-[oxybis(ethyleneoxyethyleneoxy)]di-

Inchi:

InChI=1S/C12H26O7/c13-1-3-15-5-7-17-9-11-19-12-10-18-8-6-16-4-2-14/h13-14H,1-12H

InchiKey:

IIRDTKBZINWQAW-UHFFFAOYSA-N

Formula:

C12H26O7

SMILES:

OCCOCCOCCOCCOCCOCCO

Mol. weight [g/mol]:

282.33

CAS:

2615-15-8

Physical Properties

Property code	Value	Unit	Source
gf	-748.48	kJ/mol	Joback Method
hf	-1256.57	kJ/mol	Joback Method
hfus	40.95	kJ/mol	Joback Method
hvap	87.71	kJ/mol	Joback Method
log10ws	1.19		Crippen Method
logp	-0.946		Crippen Method
mcvol	221.030	ml/mol	McGowan Method
pc	1938.95	kPa	Joback Method
rinpol	2081.80		NIST Webbook
rinpol	2078.00		NIST Webbook
rinpol	2081.80		NIST Webbook
rinpol	2078.00		NIST Webbook
tb	770.42	K	Joback Method
tc	868.00	K	Critical temperatures and pressures of ethylene glycols
tf	274.45 ± 0.70	K	NIST Webbook

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	684.04	J/molxK	770.42	Joback Method
cpg	752.22	J/molxK	943.85	Joback Method
cpg	742.77	J/molxK	914.94	Joback Method
cpg	732.53	J/molxK	886.04	Joback Method
cpg	721.52	J/molxK	857.13	Joback Method
cpg	709.75	J/molxK	828.23	Joback Method
cpg	697.26	J/molxK	799.32	Joback Method
cpl	620.00	J/molxK	298.00	NIST Webbook
dvisc	0.0000026	Paxs	770.42	Joback Method
dvisc	0.0000043	Paxs	718.32	Joback Method
dvisc	0.0000079	Paxs	666.21	Joback Method
dvisc	0.0000159	Paxs	614.11	Joback Method
dvisc	0.0000364	Paxs	562.00	Joback Method
dvisc	0.0000986	Paxs	509.90	Joback Method
dvisc	0.0003360	Paxs	457.79	Joback Method

Datasets

Mass density, kg/m3

Temperature, K - Liquid	Pressure, kPa - Liquid	Mass density, kg/m3 - Liquid
283.13	100.00	1134.5
283.13	1000.00	1134.8
283.13	2000.00	1135.1
283.13	5000.00	1136.4
283.13	7000.00	1137.3
283.13	10000.00	1138.5
283.13	12000.00	1139.3
283.13	16000.00	1141.1
283.13	20000.00	1142.8
283.13	25000.00	1144.6

283.13	30000.00	1146.5
283.13	35000.00	1148.5
283.13	40000.00	1150.6
283.13	45000.00	1152.6
283.13	50000.00	1154.4
283.13	55000.00	1156.4
283.13	60000.00	1158.4
283.13	65000.00	1160.0
283.13	70000.00	1161.8
283.13	75000.00	1163.6
283.13	80000.00	1165.3
283.13	85000.00	1167.1
283.13	90000.00	1168.7
283.13	95000.00	1170.5
293.16	100.00	1125.6
293.16	1000.00	1126.0
293.16	2000.00	1126.5
293.16	5000.00	1127.9
293.16	7000.00	1128.9
293.16	10000.00	1130.3
293.16	12000.00	1131.1
293.16	16000.00	1132.9
293.16	20000.00	1134.6
293.16	25000.00	1136.8
293.16	30000.00	1138.3
293.16	35000.00	1140.8
293.16	40000.00	1143.1
293.16	45000.00	1144.9
293.16	50000.00	1146.9
293.16	55000.00	1148.9
293.16	60000.00	1150.8
293.16	65000.00	1152.8
293.16	70000.00	1154.6
293.16	75000.00	1156.4
293.16	80000.00	1158.3
293.16	85000.00	1160.0
293.16	90000.00	1161.7
293.16	95000.00	1163.5
303.15	100.00	1117.5
303.15	1000.00	1118.0
303.15	2000.00	1118.5
303.15	5000.00	1120.0
303.15	7000.00	1120.8
303.15	10000.00	1122.3

303.15	12000.00	1123.2
303.15	16000.00	1124.9
303.15	20000.00	1126.8
303.15	25000.00	1129.1
303.15	30000.00	1131.2
303.15	35000.00	1133.4
303.15	40000.00	1135.4
303.15	45000.00	1137.5
303.15	50000.00	1139.4
303.15	55000.00	1141.6
303.15	60000.00	1143.4
303.15	65000.00	1145.2
303.15	70000.00	1147.2
303.15	75000.00	1149.1
303.15	80000.00	1150.8
303.15	85000.00	1152.9
303.15	90000.00	1154.8
303.15	95000.00	1156.4
313.16	100.00	1109.2
313.16	1000.00	1109.7
313.16	2000.00	1110.2
313.16	5000.00	1111.9
313.16	7000.00	1112.8
313.16	10000.00	1114.3
313.16	12000.00	1115.2
313.16	16000.00	1117.1
313.16	20000.00	1119.0
313.16	25000.00	1121.3
313.16	30000.00	1123.4
313.16	35000.00	1125.7
313.16	40000.00	1127.8
313.16	45000.00	1129.9
313.16	50000.00	1132.0
313.16	55000.00	1134.2
313.16	60000.00	1135.7
313.16	65000.00	1138.1
313.16	70000.00	1140.0
313.16	75000.00	1142.1
313.16	80000.00	1144.0
313.16	85000.00	1145.9
313.16	90000.00	1147.8
313.16	95000.00	1149.7
323.14	100.00	1100.9
323.14	1000.00	1101.3

323.14	2000.00	1101.8
323.14	5000.00	1103.5
323.14	7000.00	1104.5
323.14	10000.00	1106.0
323.14	12000.00	1106.9
323.14	16000.00	1109.0
323.14	20000.00	1110.5
323.14	25000.00	1113.2
323.14	30000.00	1115.6
323.14	35000.00	1118.0
323.14	40000.00	1120.2
323.14	45000.00	1122.4
323.14	50000.00	1124.5
323.14	55000.00	1126.4
323.14	60000.00	1128.5
323.14	65000.00	1130.6
323.14	70000.00	1132.6
323.14	75000.00	1134.6
323.14	80000.00	1136.8
323.14	85000.00	1138.6
323.14	90000.00	1140.7
323.14	95000.00	1142.4
333.15	100.00	1092.7
333.15	1000.00	1093.3
333.15	2000.00	1093.8
333.15	5000.00	1095.4
333.15	7000.00	1096.5
333.15	10000.00	1098.2
333.15	12000.00	1099.1
333.15	16000.00	1101.3
333.15	20000.00	1103.4
333.15	25000.00	1105.8
333.15	30000.00	1108.2
333.15	35000.00	1110.5
333.15	40000.00	1112.8
333.15	45000.00	1115.1
333.15	50000.00	1117.3
333.15	55000.00	1119.4
333.15	60000.00	1121.7
333.15	65000.00	1123.7
333.15	70000.00	1125.5
333.15	75000.00	1127.8
333.15	80000.00	1130.0
333.15	85000.00	1131.9

333.15	90000.00	1133.8
333.15	95000.00	1135.7
343.16	100.00	1084.7
343.16	1000.00	1085.3
343.16	2000.00	1085.9
343.16	5000.00	1087.6
343.16	7000.00	1088.7
343.16	10000.00	1090.4
343.16	12000.00	1091.2
343.16	16000.00	1093.5
343.16	20000.00	1095.7
343.16	25000.00	1097.9
343.16	30000.00	1100.5
343.16	35000.00	1102.8
343.16	40000.00	1105.4
343.16	45000.00	1107.6
343.16	50000.00	1109.9
343.16	55000.00	1112.1
343.16	60000.00	1114.5
343.16	65000.00	1116.6
343.16	70000.00	1118.8
343.16	75000.00	1120.9
343.16	80000.00	1123.1
343.16	85000.00	1125.2
343.16	90000.00	1127.2
343.16	95000.00	1129.2
353.14	100.00	1076.7
353.14	1000.00	1077.2
353.14	2000.00	1077.9
353.14	5000.00	1079.7
353.14	7000.00	1080.7
353.14	10000.00	1082.4
353.14	12000.00	1083.6
353.14	16000.00	1085.7
353.14	20000.00	1087.8
353.14	25000.00	1090.4
353.14	30000.00	1093.0
353.14	35000.00	1095.6
353.14	40000.00	1098.2
353.14	45000.00	1100.3
353.14	50000.00	1102.7
353.14	55000.00	1105.0
353.14	60000.00	1107.4
353.14	65000.00	1109.6

353.14	70000.00	1111.8
353.14	75000.00	1114.2
353.14	80000.00	1116.1
353.14	85000.00	1118.3
353.14	90000.00	1120.3
353.14	95000.00	1122.4
363.13	100.00	1068.4
363.13	1000.00	1068.6
363.13	2000.00	1069.0
363.13	5000.00	1071.6
363.13	7000.00	1072.7
363.13	10000.00	1074.6
363.13	12000.00	1075.6
363.13	16000.00	1078.0
363.13	20000.00	1080.2
363.13	25000.00	1083.0
363.13	30000.00	1085.4
363.13	35000.00	1088.1
363.13	40000.00	1090.6
363.13	45000.00	1092.7
363.13	50000.00	1095.2
363.13	55000.00	1097.6
363.13	60000.00	1100.1
363.13	65000.00	1102.5
363.13	70000.00	1104.8
363.13	75000.00	1107.0
363.13	80000.00	1109.2
363.13	85000.00	1111.2
363.13	90000.00	1113.5
363.13	95000.00	1115.6

Reference

<https://www.doi.org/10.1016/j.fluid.2017.01.003>

Sources

McGowan Method:

<http://link.springer.com/article/10.1007/BF02311772>

NIST Webbook:

<http://webbook.nist.gov/cgi/cbook.cgi?ID=C2615158&Units=SI>

Crippen Method:

<http://pubs.acs.org/doi/abs/10.1021/ci990307l>

Crippen Method:

https://www.chemeo.com/doc/models/crippen_log10ws

New measurements and modeling of high pressure thermodynamic properties, vapour pressures, and pressures of ethylene glycols:

<https://www.doi.org/10.1016/j.fluid.2017.01.003>

<https://www.doi.org/10.1016/j.fluid.2018.05.011>

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
mccvol:	McGowan's characteristic volume
pc:	Critical Pressure
rho:	Liquid Density
rinpol:	Non-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/49-287-0/Hexaethylene-glycol.pdf>

Generated by Cheméo on 2024-04-26 05:29:22.139966268 +0000 UTC m=+16398611.060543579.

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