Cyclopentanol, 2-methyl-, trans-

Other names: (E)-2-Methylcyclopentanol
2-Methylcyclopentanol, (E)-
2-Methylcyclopentanol, (trans)-
trans-2-Methylcyclopentan-1-ol
trans-2-Methylcyclopentanol
Inchi: InChI=1S/C6H12O/c1-5-3-2-4-6(5)7/h5-7H,2-4H2,1H3/t5-,6-/m1/s1
InchiKey: BVIJQMCYYASIFP-PHDIDXHHSA-N
Formula: C6H12O
SMILES: CC1CCCC1O
Mol. weight [g/mol]: 100.16
CAS: 25144-04-1

Physical Properties

Property code	Value	Unit	Source
gf	-108.34	kJ/mol	Joback Method
hf	-279.26	kJ/mol	Joback Method
hfus	10.39	kJ/mol	Joback Method
hvap	45.58	kJ/mol	Joback Method
log10ws	-1.36		Crippen Method
logp	1.167		Crippen Method
mcvol	90.410	ml/mol	McGowan Method
pc	4135.61	kPa	Joback Method
ripol	1344.00		NIST Webbook
ripol	1344.00		NIST Webbook
tb	416.00 ± 3.00	K	NIST Webbook
tc	626.67	K	Joback Method
tf	224.86	K	Joback Method
vc	0.331	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	190.21	J/mol×K	439.47	Joback Method
cpg	202.53	J/mol×K	470.67	Joback Method

cpg	214.29	J/mol×K	501.87	Joback Method
cpg	225.50	J/mol×K	533.07	Joback Method
cpg	236.17	J/mol×K	564.27	Joback Method
cpg	246.32	J/mol×K	595.47	Joback Method
cpg	255.97	J/mol×K	626.67	Joback Method
dvisc	0.0399340	Pa×s	224.86	Joback Method
dvisc	0.0100642	Pa×s	260.63	Joback Method
dvisc	0.0035374	Pa×s	296.40	Joback Method
dvisc	0.0015573	Pa×s	332.16	Joback Method
dvisc	0.0008042	Pa×s	367.93	Joback Method
dvisc	0.0004669	Pa×s	403.70	Joback Method
dvisc	0.0002961	Pa×s	439.47	Joback Method

Pressure Dependent Properties

Property code	Value	Unit	Pressure [kPa]	Source
tbrp	423.70	K	98.70	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.78444e+01
Coeff. B	-4.72268e+03
Coeff. C	-5.89250e+01
Temperature range (K), min.	327.92
Temperature range (K), max.	435.75

Sources

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C25144041&Units=SI

The Yaws Handbook of Vapor Pressure: https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure

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
mcvol:	McGowan's characteristic volume
pc:	Critical Pressure
pvap:	Vapor pressure
ripol:	Polar retention indices
tb:	Normal Boiling Point Temperature
tbrp:	Boiling point at reduced pressure
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume