

5-Nonanol, 5-butyl-

Other names:	5-Butyl-5-nonanol Tributylcarbinol Tributylmethanol
Inchi:	InChI=1S/C13H28O/c1-4-7-10-13(14,11-8-5-2)12-9-6-3/h14H,4-12H2,1-3H3
InchiKey:	RWKMYNWNESNJQQ-UHFFFAOYSA-N
Formula:	C13H28O
SMILES:	CCCCC(O)(CCCC)CCCC
Mol. weight [g/mol]:	200.36
CAS:	597-93-3

Physical Properties

Property code	Value	Unit	Source
gf	-75.40	kJ/mol	Joback Method
hf	-472.63	kJ/mol	Joback Method
hfus	26.10	kJ/mol	Joback Method
hvap	59.91	kJ/mol	Joback Method
log10ws	-4.64		Crippen Method
logp	4.288		Crippen Method
mcvol	199.900	ml/mol	McGowan Method
pc	1803.09	kPa	Joback Method
tb	585.79	K	Joback Method
tc	750.08	K	Joback Method
tf	299.51	K	Joback Method
vc	0.771	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	532.58	J/mol×K	585.79	Joback Method
cpg	548.46	J/mol×K	613.17	Joback Method
cpg	563.62	J/mol×K	640.55	Joback Method
cpg	578.11	J/mol×K	667.93	Joback Method
cpg	591.95	J/mol×K	695.32	Joback Method
cpg	605.16	J/mol×K	722.70	Joback Method

cpg	617.78	J/mol×K	750.08	Joback Method
cpl	548.63	J/mol×K	298.15	NIST Webbook
dvisc	0.0196051	Pa×s	299.51	Joback Method
dvisc	0.0039450	Pa×s	347.22	Joback Method
dvisc	0.0011695	Pa×s	394.94	Joback Method
dvisc	0.0004506	Pa×s	442.65	Joback Method
dvisc	0.0002090	Pa×s	490.36	Joback Method
dvisc	0.0001111	Pa×s	538.08	Joback Method
dvisc	0.0000655	Pa×s	585.79	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/(T + C)$
Coeff. A	1.54370e+01
Coeff. B	-4.89492e+03
Coeff. C	-8.88100e+01
Temperature range (K), min.	411.92
Temperature range (K), max.	572.23

Sources

NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C597933&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
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
hvac:	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
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume

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