Octane, 3,7-dimethyl-1-(2,5-xylyl)-

Other names: 1,4-Dimethyl-2-(3,7-dimethyloctyl)benzene
Inchi: InChI=1S/C18H30/c1-14(2)7-6-8-15(3)10-12-18-13-16(4)9-11-17(18)5/h9,11,13-15H,6-8,
InchiKey: GDGPOTBJJLOPRZ-UHFFFAOYSA-N
Formula: C18H30
SMILES: Cc1ccc(C)c(CCC(C)CCCC(C)C)c1
Mol. weight [g/mol]: 246.43
CAS: 19550-60-8

Physical Properties

Property code	Value	Unit	Source
gf	188.95	kJ/mol	Joback Method
hf	-211.82	kJ/mol	Joback Method
hfus	28.59	kJ/mol	Joback Method
hvap	58.49	kJ/mol	Joback Method
log10ws	-6.09		Crippen Method
logp	5.698		Crippen Method
mcvol	240.720	ml/mol	McGowan Method
pc	1446.83	kPa	Joback Method
tb	647.00	K	Joback Method
tc	840.66	K	Joback Method
tf	314.08	K	Joback Method
vc	0.923	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	654.92	J/mol×K	647.00	Joback Method
cpg	745.49	J/mol×K	808.39	Joback Method
cpg	729.30	J/mol×K	776.11	Joback Method
cpg	712.19	J/mol×K	743.83	Joback Method
cpg	694.11	J/mol×K	711.55	Joback Method
cpg	675.03	J/mol×K	679.28	Joback Method
cpg	760.78	J/mol×K	840.66	Joback Method
dvisc	0.0001040	Pa×s	647.00	Joback Method

dvisc	0.0001392	Pa×s	591.51	Joback Method
dvisc	0.0001979	Pa×s	536.03	Joback Method
dvisc	0.0003053	Pa×s	480.54	Joback Method
dvisc	0.0005273	Pa×s	425.05	Joback Method
dvisc	0.0010733	Pa×s	369.57	Joback Method
dvisc	0.0028079	Pa×s	314.08	Joback Method

Sources

NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C19550608&Units=SI
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
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume