2,6,10-trimethyl-7-(3-methylbutyl)dodecane

Inchi: InChI=1S/C20H42/c1-8-18(6)13-15-20(14-12-17(4)5)19(7)11-9-10-16(2)3/h16-20H,8-15H
InchiKey: LSVDXMJHSYNAGC-UHFFFAOYSA-N
Formula: C20H42
SMILES: CCC(C)CCC(CCC(C)C)C(C)CCCC(C)C
Mol. weight [g/mol]: 282.55

Physical Properties

Property code	Value	Unit	Source
gf	105.32	kJ/mol	Joback Method
hf	-482.53	kJ/mol	Joback Method
hfus	29.94	kJ/mol	Joback Method
hvap	58.17	kJ/mol	Joback Method
log10ws	-6.99		Crippen Method
logp	7.328		Crippen Method
mcvol	292.660	ml/mol	McGowan Method
pc	1041.93	kPa	Joback Method
rinpol	1706.00		NIST Webbook
rinpol	1706.00		NIST Webbook
tb	654.80	K	Joback Method
tc	824.55	K	Joback Method
tf	240.16	K	Joback Method
vc	1.125	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	842.14	J/mol×K	654.80	Joback Method
cpg	864.47	J/mol×K	683.09	Joback Method
cpg	885.81	J/mol×K	711.38	Joback Method
cpg	906.19	J/mol×K	739.68	Joback Method
cpg	925.64	J/mol×K	767.97	Joback Method
cpg	944.18	J/mol×K	796.26	Joback Method
cpg	961.85	J/mol×K	824.55	Joback Method
dvisc	0.0359131	Pa×s	240.16	Joback Method

dvisc	0.0039123	Pa×s	309.27	Joback Method
dvisc	0.0009579	Pa×s	378.37	Joback Method
dvisc	0.0003622	Pa×s	447.48	Joback Method
dvisc	0.0001777	Pa×s	516.59	Joback Method
dvisc	0.0001031	Pa×s	585.69	Joback Method
dvisc	0.0000671	Pa×s	654.80	Joback Method

Sources

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
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=R261939&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l

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