Docosane, 10-ethyl-10-propyl-

Inchi: InChI=1S/C27H56/c1-5-9-11-13-15-16-17-19-21-23-26-27(8-4,24-7-3)25-22-20-18-14-12
InchiKey: SAGFXTHPTPNQPD-UHFFFAOYSA-N
Formula: C27H56
SMILES: CCCCCCCCCCCCC(CC)(CCC)CCCCCCCCC
Mol. weight [g/mol]: 380.73
CAS: 55282-31-0

Physical Properties

Property code	Value	Unit	Source
gf	179.30	kJ/mol	Joback Method
hf	-609.36	kJ/mol	Joback Method
hfus	58.27	kJ/mol	Joback Method
hvap	74.40	kJ/mol	Joback Method
log10ws	-10.88		Crippen Method
logp	10.635		Crippen Method
mcvol	391.290	ml/mol	McGowan Method
pc	695.81	kPa	Joback Method
tb	813.93	K	Joback Method
tc	996.49	K	Joback Method
tf	209.00 ± 3.00	K	NIST Webbook
vc	1.536	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	1282.03	J/mol×K	813.93	Joback Method
cpg	1306.42	J/mol×K	844.36	Joback Method
cpg	1329.60	J/mol×K	874.78	Joback Method
cpg	1351.65	J/mol×K	905.21	Joback Method
cpg	1372.63	J/mol×K	935.64	Joback Method
cpg	1392.59	J/mol×K	966.07	Joback Method
cpg	1411.62	J/mol×K	996.49	Joback Method
dvisc	0.0016537	Pa×s	396.47	Joback Method
dvisc	0.0005159	Pa×s	466.05	Joback Method

dvisc	0.0002178	Pa×s	535.62	Joback Method
dvisc	0.0001122	Pa×s	605.20	Joback Method
dvisc	0.0000662	Pa×s	674.78	Joback Method
dvisc	0.0000431	Pa×s	744.35	Joback Method
dvisc	0.0000302	Pa×s	813.93	Joback Method

Sources

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

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C55282310&Units=SI

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