5-Tridecene

Inchi: InChI=1S/C13H26/c1-3-5-7-9-11-13-12-10-8-6-4-2/h9,11H,3-8,10,12-13H2,1-2H3
InchiKey: VDFGUEPMNNLWOZ-UHFFFAOYSA-N
Formula: C13H26
SMILES: CCCCC=CCCCCCCC
Mol. weight [g/mol]: 182.35
CAS: 42714-71-6

Physical Properties

Property code	Value	Unit	Source
gf	138.80	kJ/mol	Joback Method
hf	-194.43	kJ/mol	Joback Method
hfus	29.63	kJ/mol	Joback Method
hvap	44.49	kJ/mol	Joback Method
log10ws	-5.12		Crippen Method
logp	5.093		Crippen Method
mcvol	189.730	ml/mol	McGowan Method
pc	1716.03	kPa	Joback Method
rinpol	1289.00		NIST Webbook
tb	501.00	K	Joback Method
tc	667.97	K	Joback Method
tf	231.19	K	Joback Method
vc	0.744	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	439.01	J/mol×K	501.00	Joback Method
cpg	456.28	J/mol×K	528.83	Joback Method
cpg	472.83	J/mol×K	556.66	Joback Method
cpg	488.69	J/mol×K	584.48	Joback Method
cpg	503.87	J/mol×K	612.31	Joback Method
cpg	518.42	J/mol×K	640.14	Joback Method
cpg	532.34	J/mol×K	667.97	Joback Method
dvisc	0.0056599	Pa×s	231.19	Joback Method

dvisc	0.0019529	Pa×s	276.16	Joback Method
dvisc	0.0009078	Pa×s	321.13	Joback Method
dvisc	0.0005093	Pa×s	366.10	Joback Method
dvisc	0.0003243	Pa×s	411.06	Joback Method
dvisc	0.0002257	Pa×s	456.03	Joback Method
dvisc	0.0001677	Pa×s	501.00	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.51867e+01
Coeff. B	-4.46732e+03
Coeff. C	-7.62250e+01
Temperature range (K), min.	376.06
Temperature range (K), max.	528.60

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=C42714716&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

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