4-Undecene, (Z)-

Other names: (Z)-4-Undecene
4-Undecene, cis-
cis-4-Undecene
Inchi: InChI=1S/C11H22/c1-3-5-7-9-11-10-8-6-4-2/h7,9H,3-6,8,10-11H2,1-2H3/b9-7-
InchiKey: JABYJIQOLGWMQW-CLFYSBASSA-N
Formula: C11H22
SMILES: CCCC=CCCCCCC
Mol. weight [g/mol]: 154.29
CAS: 821-98-7

Physical Properties

Property code	Value	Unit	Source
gf	121.96	kJ/mol	Joback Method
hf	-153.15	kJ/mol	Joback Method
hfus	24.45	kJ/mol	Joback Method
hvap	40.04	kJ/mol	Joback Method
log10ws	-4.28		Crippen Method
logp	4.313		Crippen Method
mcvol	161.550	ml/mol	McGowan Method
pc	2025.41	kPa	Joback Method
rinpol	1080.00		NIST Webbook
rinpol	1092.00		NIST Webbook
rinpol	1080.00		NIST Webbook
rinpol	1081.00		NIST Webbook
rinpol	1082.00		NIST Webbook
rinpol	1080.00		NIST Webbook
rinpol	1086.90		NIST Webbook
rinpol	1080.00		NIST Webbook
rinpol	1080.00		NIST Webbook
ripol	1148.00		NIST Webbook
ripol	1149.60		NIST Webbook
ripol	1146.00		NIST Webbook
ripol	1145.80		NIST Webbook
ripol	1145.60		NIST Webbook
ripol	1146.00		NIST Webbook
ripol	1149.60		NIST Webbook
ripol	1145.80		NIST Webbook

ripol	1140.00		NIST Webbook
ripol	1145.60		NIST Webbook
ripol	1144.00		NIST Webbook
ripol	1142.00		NIST Webbook
ripol	1142.00		NIST Webbook
ripol	1141.00		NIST Webbook
ripol	1150.00		NIST Webbook
tb	455.24	K	Joback Method
tc	624.41	K	Joback Method
tf	208.65	K	Joback Method
vc	0.631	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	430.08	J/mol×K	624.41	Joback Method
cpg	417.34	J/mol×K	596.22	Joback Method
cpg	404.02	J/mol×K	568.02	Joback Method
cpg	390.12	J/mol×K	539.83	Joback Method
cpg	375.59	J/mol×K	511.63	Joback Method
cpg	360.43	J/mol×K	483.44	Joback Method
cpg	344.60	J/mol×K	455.24	Joback Method
dvisc	0.0058574	Pa×s	208.65	Joback Method
dvisc	0.0001891	Pa×s	455.24	Joback Method
dvisc	0.0002523	Pa×s	414.14	Joback Method
dvisc	0.0003587	Pa×s	373.04	Joback Method
dvisc	0.0005563	Pa×s	331.95	Joback Method
dvisc	0.0009768	Pa×s	290.85	Joback Method
dvisc	0.0020642	Pa×s	249.75	Joback Method
hvapt	51.60	kJ/mol	363.00	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.48435e+01
Coeff. B	-3.95474e+03

Coeff. C	-7.40910e+01
Temperature range (K), min.	345.78
Temperature range (K), max.	488.98

Sources

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=C821987&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

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
hvapt:	Enthalpy of vaporization at a given temperature
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
ripol:	Polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume