2-Dodecene, (E)-

Other names:	(2E)-2-Dodecene
	(E)-2-Dodecene
	2-Dodecene, trans-
	trans-2-Dodecene
Inchi:	InChI=1S/C12H24/c1-3-5-7-9-11-12-10-8-6-4-2/h3,5H,4,6-12H2,1-2H3/b5-3+
InchiKey:	ADOQBZAVKYCFOI-HWKANZROSA-N
Formula:	C12H24
SMILES:	CC=CCCCCCCCCC
Mol. weight [g/mol]:	168.32
CAS:	7206-13-5

Physical Properties

Property code	Value	Unit	Source
gf	130.38	kJ/mol	Joback Method
hf	-173.79	kJ/mol	Joback Method
hfus	27.04	kJ/mol	Joback Method
hvap	42.26	kJ/mol	Joback Method
log10ws	-4.70		Crippen Method
logp	4.703		Crippen Method
mcvol	175.640	ml/mol	McGowan Method
pc	1861.11	kPa	Joback Method
rinpol	1196.90		NIST Webbook
rinpol	1205.00		NIST Webbook
rinpol	1196.90		NIST Webbook
rinpol	1196.80		NIST Webbook
rinpol	1196.90		NIST Webbook
rinpol	1201.00		NIST Webbook
rinpol	1202.90		NIST Webbook
rinpol	1197.00		NIST Webbook
rinpol	1197.00		NIST Webbook
rinpol	1197.00		NIST Webbook
rinpol	1197.00		NIST Webbook
rinpol	1203.00		NIST Webbook
rinpol	1202.00		NIST Webbook
rinpol	1202.00		NIST Webbook
rinpol	1197.00		NIST Webbook
rinpol	1197.00		NIST Webbook

rinpol	1196.90		NIST Webbook
rinpol	1201.00		NIST Webbook
rinpol	1202.00		NIST Webbook
rinpol	1197.00		NIST Webbook
ripol	1260.00		NIST Webbook
ripol	1266.50		NIST Webbook
ripol	1266.00		NIST Webbook
ripol	1251.80		NIST Webbook
ripol	1263.00		NIST Webbook
ripol	1261.00		NIST Webbook
ripol	1251.80		NIST Webbook
ripol	1254.40		NIST Webbook
ripol	1266.50		NIST Webbook
ripol	1267.50		NIST Webbook
ripol	1267.50		NIST Webbook
ripol	1266.50		NIST Webbook
ripol	1267.00		NIST Webbook
ripol	1266.00		NIST Webbook
ripol	1266.00		NIST Webbook
ripol	1265.00		NIST Webbook
ripol	1265.00		NIST Webbook
ripol	1261.00		NIST Webbook
ripol	1261.00		NIST Webbook
ripol	1260.00		NIST Webbook
ripol	1260.00		NIST Webbook
ripol	1260.00		NIST Webbook
ripol	1267.00		NIST Webbook
ripol	1266.00		NIST Webbook
ripol	1266.00		NIST Webbook
ripol	1260.00		NIST Webbook
ripol	1255.70		NIST Webbook
ripol	1266.00		NIST Webbook
tb	478.12	K	Joback Method
tc	646.19	K	Joback Method
tf	219.92	K	Joback Method
vc	0.688	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	390.87	J/mol×K	478.12	Joback Method

cpg	407.46	J/mol×K	506.13	Joback Method
cpg	423.37	J/mol×K	534.14	Joback Method
cpg	438.60	J/mol×K	562.15	Joback Method
cpg	453.18	J/mol×K	590.16	Joback Method
cpg	467.15	J/mol×K	618.17	Joback Method
cpg	480.52	J/mol×K	646.19	Joback Method
dvisc	0.0058071	Pa×s	219.92	Joback Method
dvisc	0.0020237	Pa×s	262.95	Joback Method
dvisc	0.0009486	Pa×s	305.99	Joback Method
dvisc	0.0005360	Pa×s	349.02	Joback Method
dvisc	0.0003433	Pa×s	392.05	Joback Method
dvisc	0.0002402	Pa×s	435.09	Joback Method
dvisc	0.0001792	Pa×s	478.12	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.48867e+01
Coeff. B	-3.97767e+03
Coeff. C	-9.30800e+01
Temperature range (K), min.	365.54
Temperature range (K), max.	508.49

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=C7206135&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
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