5-Dodecene, (E)-

Other names: (5E)-5-Dodecene
(E)-5-Dodecene
trans-5-Dodecene
Inchi: InChI=1S/C12H24/c1-3-5-7-9-11-12-10-8-6-4-2/h9,11H,3-8,10,12H2,1-2H3/b11-9+
InchiKey: ZOKYTRIEIDWYSG-PKNBQFBNSA-N
Formula: C12H24
SMILES: CCCCC=CCCCCCC
Mol. weight [g/mol]: 168.32
CAS: 7206-16-8

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	1180.60		NIST Webbook
rinpol	1179.80		NIST Webbook
rinpol	1181.60		NIST Webbook
rinpol	1181.10		NIST Webbook
rinpol	1182.20		NIST Webbook
rinpol	1180.00		NIST Webbook
rinpol	1182.00		NIST Webbook
rinpol	1181.00		NIST Webbook
rinpol	1181.00		NIST Webbook
rinpol	1188.00		NIST Webbook
rinpol	1189.00		NIST Webbook
rinpol	1181.00		NIST Webbook
rinpol	1181.00		NIST Webbook
ripol	1240.00		NIST Webbook
ripol	1232.00		NIST Webbook
ripol	1232.00		NIST Webbook
ripol	1239.00		NIST Webbook

ripol	1232.00		NIST Webbook
ripol	1239.80		NIST Webbook
ripol	1238.00		NIST Webbook
ripol	1239.80		NIST Webbook
ripol	1239.40		NIST Webbook
ripol	1240.00		NIST Webbook
ripol	1239.00		NIST Webbook
ripol	1238.00		NIST Webbook
ripol	1238.00		NIST Webbook
ripol	1237.00		NIST Webbook
ripol	1231.00		NIST Webbook
ripol	1234.00		NIST Webbook
ripol	1233.00		NIST Webbook
ripol	1239.40		NIST Webbook
ripol	1237.00		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	467.15	J/mol×K	618.17	Joback Method
cpg	453.18	J/mol×K	590.16	Joback Method
cpg	438.60	J/mol×K	562.15	Joback Method
cpg	423.37	J/mol×K	534.14	Joback Method
cpg	407.46	J/mol×K	506.13	Joback Method
cpg	480.52	J/mol×K	646.19	Joback Method
dvisc	0.0001792	Pa×s	478.12	Joback Method
dvisc	0.0002402	Pa×s	435.09	Joback Method
dvisc	0.0003433	Pa×s	392.05	Joback Method
dvisc	0.0005360	Pa×s	349.02	Joback Method
dvisc	0.0009486	Pa×s	305.99	Joback Method
dvisc	0.0020237	Pa×s	262.95	Joback Method
dvisc	0.0058071	Pa×s	219.92	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.45070e+01
Coeff. B	-3.85492e+03
Coeff. C	-9.06180e+01
Temperature range (K), min.	361.72
Temperature range (K), max.	509.84

Sources

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
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=C7206168&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
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