2,4-Dodecadiene, (E,Z)-

Other names: (2E,4Z)-2,4-Dodecadiene
(E,Z)-2,4-Dodecadiene
Inchi: InChI=1S/C12H22/c1-3-5-7-9-11-12-10-8-6-4-2/h3,5,7,9H,4,6,8,10-12H2,1-2H3/b5-3+,9-
InchiKey: NJMCFBIRFRIKSQ-PKWCJPJFSA-N
Formula: C12H22
SMILES: CC=CC=CCCCCCCC
Mol. weight [g/mol]: 166.30
CAS: 74685-27-1

Physical Properties

Property code	Value	Unit	Source
gf	210.60	kJ/mol	Joback Method
hf	-56.57	kJ/mol	Joback Method
hfus	27.24	kJ/mol	Joback Method
hvap	42.22	kJ/mol	Joback Method
log10ws	-4.55		Crippen Method
logp	4.479		Crippen Method
mcvol	171.340	ml/mol	McGowan Method
pc	1947.51	kPa	Joback Method
ripol	1402.00		NIST Webbook
tb	482.28	K	Joback Method
tc	657.85	K	Joback Method
tf	214.84	K	Joback Method
vc	0.667	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	374.67	J/mol×K	482.28	Joback Method
cpg	391.05	J/mol×K	511.54	Joback Method
cpg	406.67	J/mol×K	540.80	Joback Method
cpg	421.55	J/mol×K	570.07	Joback Method
cpg	435.73	J/mol×K	599.33	Joback Method
cpg	449.24	J/mol×K	628.59	Joback Method

cpg	462.12	J/mol×K	657.85	Joback Method
dvisc	0.0054890	Pa×s	214.84	Joback Method
dvisc	0.0018018	Pa×s	259.41	Joback Method
dvisc	0.0008200	Pa×s	303.99	Joback Method
dvisc	0.0004564	Pa×s	348.56	Joback Method
dvisc	0.0002901	Pa×s	393.13	Joback Method
dvisc	0.0002022	Pa×s	437.71	Joback Method
dvisc	0.0001507	Pa×s	482.28	Joback Method

Sources

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C74685271&Units=SI
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

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
ripol: Polar retention indices
tb: Normal Boiling Point Temperature
tc: Critical Temperature
tf: Normal melting (fusion) point
vc: Critical Volume

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