

trans,trans-2,10-Dodecadiene

Inchi:	InChI=1S/C12H22/c1-3-5-7-9-11-12-10-8-6-4-2/h3-6H,7-12H2,1-2H3/b5-3+,6-4+
InchiKey:	KAVHZTLYHOAWPZ-GGWOSOGESA-N
Formula:	C12H22
SMILES:	CC=CCCCCCCC=CC
Mol. weight [g/mol]:	166.30

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
rinpol	1203.00		NIST Webbook
rinpol	1203.00		NIST Webbook
tb	482.28	K	Joback Method
tc	657.85	K	Joback Method
tf	214.84	K	Joback Method
vc	0.667	m ³ /kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	374.67	J/molxK	482.28	Joback Method
cpg	449.24	J/molxK	628.59	Joback Method
cpg	435.73	J/molxK	599.33	Joback Method
cpg	421.55	J/molxK	570.07	Joback Method
cpg	406.67	J/molxK	540.80	Joback Method
cpg	391.05	J/molxK	511.54	Joback Method
cpg	462.12	J/molxK	657.85	Joback Method
dvisc	0.0001507	Paxs	482.28	Joback Method

dvisc	0.0002022	Paxs	437.71	Joback Method
dvisc	0.0002901	Paxs	393.13	Joback Method
dvisc	0.0004564	Paxs	348.56	Joback Method
dvisc	0.0008200	Paxs	303.99	Joback Method
dvisc	0.0018018	Paxs	259.41	Joback Method
dvisc	0.0054890	Paxs	214.84	Joback Method

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=R133943&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws

Legend

cp_g:	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:	Log ₁₀ of Water solubility in mol/l
logp:	Octanol/Water partition coefficient
mcvol:	McGowan's characteristic volume
pc:	Critical Pressure
rinpol:	Non-polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume

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