1,10-Undecadiene

Other names: Undecadiene, 1,10-
Inchi: InChI=1S/C11H20/c1-3-5-7-9-11-10-8-6-4-2/h3-4H,1-2,5-11H2
InchiKey: VOSLXTGMYNYCPW-UHFFFAOYSA-N
Formula: C11H20
SMILES: C=CCCCCCCCC=C
Mol. weight [g/mol]: 152.28
CAS: 13688-67-0

Physical Properties

Property code	Value	Unit	Source
gf	217.42	kJ/mol	Joback Method
hf	-19.51	kJ/mol	Joback Method
hfus	21.69	kJ/mol	Joback Method
hvap	38.74	kJ/mol	Joback Method
log10ws	-4.13		Crippen Method
logp	4.089		Crippen Method
mcvol	157.250	ml/mol	McGowan Method
pc	2085.03	kPa	Joback Method
rinpol	1083.00		NIST Webbook
rinpol	1085.00		NIST Webbook
rinpol	1078.00		NIST Webbook
rinpol	1067.00		NIST Webbook
rinpol	1088.00		NIST Webbook
rinpol	1067.00		NIST Webbook
ripol	1250.00		NIST Webbook
tb	462.00 ± 2.00	K	NIST Webbook
tc	612.41	K	Joback Method
tf	210.21	K	Joback Method
vc	0.614	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	326.28	J/mol×K	444.44	Joback Method

cpg	341.32	J/mol×K	472.43	Joback Method
cpg	355.74	J/mol×K	500.43	Joback Method
cpg	369.54	J/mol×K	528.42	Joback Method
cpg	382.76	J/mol×K	556.42	Joback Method
cpg	395.41	J/mol×K	584.41	Joback Method
cpg	407.51	J/mol×K	612.41	Joback Method
dvisc	0.0047617	Pa×s	210.21	Joback Method
dvisc	0.0019245	Pa×s	249.25	Joback Method
dvisc	0.0009941	Pa×s	288.29	Joback Method
dvisc	0.0006011	Pa×s	327.33	Joback Method
dvisc	0.0004046	Pa×s	366.36	Joback Method
dvisc	0.0002940	Pa×s	405.40	Joback Method
dvisc	0.0002259	Pa×s	444.44	Joback Method

Sources

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C13688670&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
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