

PENTADECANE, 8-HEPTYL-

Other names:	8-Heptylpentadecane
Inchi:	InChI=1S/C22H46/c1-4-7-10-13-16-19-22(20-17-14-11-8-5-2)21-18-15-12-9-6-3/h22H,4-
InchiKey:	SGOHLOFHILWVPA-UHFFFAOYSA-N
Formula:	C22H46
SMILES:	CCCCCCCC(CCCCCC)CCCCC
Mol. weight [g/mol]:	310.61
CAS:	71005-15-7

Physical Properties

Property code	Value	Unit	Source
af	0.8720		Cheméo Relay (1.0)
gf	131.92	kJ/mol	Joback Method
hf	-497.09	kJ/mol	Cheméo Relay (1.0)
hfus	49.21	kJ/mol	Joback Method
hvap	98.04	kJ/mol	Cheméo Relay (1.0)
ie	9.61	eV	Cheméo Relay (1.0)
log10ws	-9.08		Cheméo Relay (1.0)
logp	8.684		Crippen Method
mcvol	320.840	ml/mol	McGowan Method
pc	906.15	kPa	Joback Method
tb	591.80	K	Cheméo Relay (1.0)
tc	756.94	K	Cheméo Relay (1.0)
tf	256.91	K	Cheméo Relay (1.0)
vc	1.242	m3/kmol	Cheméo Relay (1.0)

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	1063.16	J/mol×K	839.77	Joback Method
cpg	1080.72	J/mol×K	867.26	Joback Method
cpg	984.38	J/mol×K	729.81	Joback Method
cpg	1005.42	J/mol×K	757.30	Joback Method
cpg	1025.55	J/mol×K	784.79	Joback Method
cpg	1044.78	J/mol×K	812.28	Joback Method

cpg	962.39	J/mol×K	702.32	Joback Method
dvisc	0.0004861	Pa×s	449.24	Joback Method
dvisc	0.0011754	Pa×s	385.97	Joback Method
dvisc	0.0040182	Pa×s	322.70	Joback Method
dvisc	0.0002500	Pa×s	512.51	Joback Method
dvisc	0.0001488	Pa×s	575.78	Joback Method
dvisc	0.0000982	Pa×s	639.05	Joback Method
dvisc	0.0000698	Pa×s	702.32	Joback Method
hvapt	107.70	kJ/mol	305.50	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/(T + C)$
Coeff. A	1.42685e+01
Coeff. B	-4.95271e+03
Coeff. C	-1.09120e+02
Temperature range (K), min.	463.37
Temperature range (K), max.	662.06

Sources

Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws
Cheméo Relay (1.0):	
Cheméo Relay (1.0, beta):	
The Yaws Handbook of Vapor Pressure:	https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C71005157&Units=SI
Joback Method:	https://en.wikipedia.org/wiki/Joback_method
McGowan Method:	http://link.springer.com/article/10.1007/BF02311772

Legend

af:	Acentric Factor
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
hvapt:	Enthalpy of vaporization at a given temperature
ie:	Ionization energy
log10ws:	Log10 of Water solubility in mol/l
logp:	Octanol/Water partition coefficient
mcvol:	McGowan's characteristic volume
pc:	Critical Pressure
pvap:	Vapor pressure
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume

Latest version available from:

<https://www.cheméo.com/cid/77-424-6/PENTADECANE-8-HEPTYL.pdf>

Generated by Cheméo on 2026-07-27 07:37:06.361688893 +0000 UTC m=+3583.778402854.

Cheméo (<https://www.cheméo.com>) is the biggest free database of chemical and physical data for the process industry.