

Hexadecane, 7-methyl-

Other names:	7-methylhexadecane
Inchi:	InChI=1S/C17H36/c1-4-6-8-10-11-12-14-16-17(3)15-13-9-7-5-2/h17H,4-16H2,1-3H3
InchiKey:	HZRSSYSIMDTFLT-UHFFFAOYSA-N
Formula:	C17H36
SMILES:	CCCCCCCCCCC(C)CCCCC
Mol. weight [g/mol]:	240.47
CAS:	26730-20-1

Physical Properties

Property code	Value	Unit	Source
gf	89.82	kJ/mol	Joback Method
hf	-399.49	kJ/mol	Joback Method
hfus	36.26	kJ/mol	Joback Method
hvap	53.05	kJ/mol	Joback Method
log10ws	-6.70		Crippen Method
logp	6.734		Crippen Method
mcvol	250.390	ml/mol	McGowan Method
pc	1238.09	kPa	Joback Method
rinpol	1641.00		NIST Webbook
rinpol	1646.00		NIST Webbook
rinpol	1647.60		NIST Webbook
rinpol	1646.00		NIST Webbook
tb	587.92	K	Joback Method
tc	748.86	K	Joback Method
tf	266.35	K	Joback Method
vc	0.982	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	775.45	J/molxK	748.86	Joback Method
cpg	687.14	J/molxK	614.74	Joback Method
cpg	706.30	J/molxK	641.57	Joback Method
cpg	724.69	J/molxK	668.39	Joback Method

cpg	742.33	J/molxK	695.21	Joback Method
cpg	759.24	J/molxK	722.04	Joback Method
cpg	667.18	J/molxK	587.92	Joback Method
dvisc	0.0070198	Paxs	266.35	Joback Method
dvisc	0.0020606	Paxs	319.94	Joback Method
dvisc	0.0008598	Paxs	373.54	Joback Method
dvisc	0.0004468	Paxs	427.13	Joback Method
dvisc	0.0002686	Paxs	480.73	Joback Method
dvisc	0.0001789	Paxs	534.33	Joback Method
dvisc	0.0001283	Paxs	587.92	Joback Method
rho1	760.20	kg/m3	323.15	Density, Viscosity, Speed of Sound, and Bulk Modulus of Methyl Alkanes, Dimethyl Alkanes, and Hydrotreated Renewable Fuels
rho1	767.00	kg/m3	313.15	Density, Viscosity, Speed of Sound, and Bulk Modulus of Methyl Alkanes, Dimethyl Alkanes, and Hydrotreated Renewable Fuels
rho1	773.90	kg/m3	303.15	Density, Viscosity, Speed of Sound, and Bulk Modulus of Methyl Alkanes, Dimethyl Alkanes, and Hydrotreated Renewable Fuels
rho1	780.70	kg/m3	293.15	Density, Viscosity, Speed of Sound, and Bulk Modulus of Methyl Alkanes, Dimethyl Alkanes, and Hydrotreated Renewable Fuels
rho1	787.60	kg/m3	283.15	Density, Viscosity, Speed of Sound, and Bulk Modulus of Methyl Alkanes, Dimethyl Alkanes, and Hydrotreated Renewable Fuels

rhoI	725.40	kg/m3	373.15	Density, Viscosity, Speed of Sound, and Bulk Modulus of Methyl Alkanes, Dimethyl Alkanes, and Hydrotreated Renewable Fuels
rhoI	732.40	kg/m3	363.15	Density, Viscosity, Speed of Sound, and Bulk Modulus of Methyl Alkanes, Dimethyl Alkanes, and Hydrotreated Renewable Fuels
rhoI	739.30	kg/m3	353.15	Density, Viscosity, Speed of Sound, and Bulk Modulus of Methyl Alkanes, Dimethyl Alkanes, and Hydrotreated Renewable Fuels
rhoI	746.20	kg/m3	343.15	Density, Viscosity, Speed of Sound, and Bulk Modulus of Methyl Alkanes, Dimethyl Alkanes, and Hydrotreated Renewable Fuels
rhoI	753.10	kg/m3	333.15	Density, Viscosity, Speed of Sound, and Bulk Modulus of Methyl Alkanes, Dimethyl Alkanes, and Hydrotreated Renewable Fuels
rhoI	760.00	kg/m3	323.15	Density, Viscosity, Speed of Sound, and Bulk Modulus of Methyl Alkanes, Dimethyl Alkanes, and Hydrotreated Renewable Fuels
rhoI	766.90	kg/m3	313.15	Density, Viscosity, Speed of Sound, and Bulk Modulus of Methyl Alkanes, Dimethyl Alkanes, and Hydrotreated Renewable Fuels

rhoI	773.80	kg/m3	303.15	Density, Viscosity, Speed of Sound, and Bulk Modulus of Methyl Alkanes, Dimethyl Alkanes, and Hydrotreated Renewable Fuels
rhoI	780.70	kg/m3	293.15	Density, Viscosity, Speed of Sound, and Bulk Modulus of Methyl Alkanes, Dimethyl Alkanes, and Hydrotreated Renewable Fuels
rhoI	787.60	kg/m3	283.15	Density, Viscosity, Speed of Sound, and Bulk Modulus of Methyl Alkanes, Dimethyl Alkanes, and Hydrotreated Renewable Fuels

Sources

NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C26730201&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws
Density, Viscosity, Speed of Sound, and Bulk Modulus of Methyl Alkanes, Dimethyl Alkanes, and Hydrotreated Renewable Fuels:	https://www.doi.org/10.1021/je400274f
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
rhoL:	Liquid Density
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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