

Butane, 2,3-dimethyl-

Other names:	(CH3)2CHCH(CH3)2 2,3-Dimethylbutane BIISOPROPYL DIISOPROPYL UN 2457
Inchi:	InChI=1S/C6H14/c1-5(2)6(3)4/h5-6H,1-4H3
InchiKey:	ZFFMLCVRJBZUDZ-UHFFFAOYSA-N
Formula:	C6H14
SMILES:	CC(C)C(C)C
Mol. weight [g/mol]:	86.18
CAS:	79-29-8

Physical Properties

Property code	Value	Unit	Source
af	0.2470		KDB
ap	345.050	K	KDB
chl	-4154.90 ± 0.92	kJ/mol	NIST Webbook
gf	-4.10	kJ/mol	KDB
gyrad	3.5210		KDB
hcg	4154.92	kJ/mol	KDB
hcn	3846.811	kJ/mol	KDB
hf	-177.80 ± 1.00	kJ/mol	NIST Webbook
hf	-177.90	kJ/mol	KDB
hfl	-207.00 ± 1.00	kJ/mol	NIST Webbook
hfus	4.25	kJ/mol	Joback Method
hvap	29.12	kJ/mol	NIST Webbook
hvap	29.33	kJ/mol	NIST Webbook
hvap	29.10	kJ/mol	NIST Webbook
ie	10.04	eV	NIST Webbook
ie	9.79	eV	NIST Webbook
ie	10.02	eV	NIST Webbook
log10ws	-3.65		Aqueous Solubility Prediction Method
log10ws	-3.65		Estimated Solubility Method
logp	2.298		Crippen Method
mcvol	95.400	ml/mol	McGowan Method

nfpaf	%!d(float64=3)		KDB
nfpah	%!d(float64=1)		KDB
pc	3147.00 ± 2.00	kPa	NIST Webbook
pc	3150.00	kPa	KDB
pc	3150.00 ± 20.00	kPa	NIST Webbook
pc	3180.00 ± 40.00	kPa	NIST Webbook
pc	3140.00 ± 10.13	kPa	NIST Webbook
pc	3114.40 ± 66.70	kPa	NIST Webbook
pc	3145.00 ± 3.00	kPa	NIST Webbook
pc	3245.24 ± 5.00	kPa	NIST Webbook
pc	3112.40 ± 8.50	kPa	NIST Webbook
rhoc	238.71 ± 1.72	kg/m3	NIST Webbook
rhoc	241.29 ± 1.72	kg/m3	NIST Webbook
rhoc	241.12 ± 5.17	kg/m3	NIST Webbook
rinpol	568.80		NIST Webbook
rinpol	567.00		NIST Webbook
rinpol	567.20		NIST Webbook
rinpol	568.90		NIST Webbook
rinpol	567.50		NIST Webbook
rinpol	565.60		NIST Webbook
rinpol	566.10		NIST Webbook
rinpol	568.00		NIST Webbook
rinpol	569.90		NIST Webbook
rinpol	566.00		NIST Webbook
rinpol	564.00		NIST Webbook
rinpol	565.00		NIST Webbook
rinpol	566.00		NIST Webbook
rinpol	566.00		NIST Webbook
rinpol	567.00		NIST Webbook
rinpol	565.00		NIST Webbook
rinpol	565.60		NIST Webbook
rinpol	566.40		NIST Webbook
rinpol	567.10		NIST Webbook
rinpol	567.90		NIST Webbook
rinpol	568.80		NIST Webbook
rinpol	567.30		NIST Webbook
rinpol	567.40		NIST Webbook
rinpol	566.00		NIST Webbook
rinpol	567.00		NIST Webbook
rinpol	566.00		NIST Webbook
rinpol	567.00		NIST Webbook
rinpol	563.00		NIST Webbook
rinpol	565.00		NIST Webbook
rinpol	564.20		NIST Webbook

rinpol	565.40	NIST Webbook
rinpol	566.60	NIST Webbook
rinpol	567.90	NIST Webbook
rinpol	569.30	NIST Webbook
rinpol	570.70	NIST Webbook
rinpol	559.20	NIST Webbook
rinpol	561.20	NIST Webbook
rinpol	562.50	NIST Webbook
rinpol	564.90	NIST Webbook
rinpol	566.70	NIST Webbook
rinpol	568.90	NIST Webbook
rinpol	558.00	NIST Webbook
rinpol	568.00	NIST Webbook
rinpol	568.00	NIST Webbook
rinpol	569.00	NIST Webbook
rinpol	570.00	NIST Webbook
rinpol	568.00	NIST Webbook
rinpol	568.00	NIST Webbook
rinpol	568.00	NIST Webbook
rinpol	568.00	NIST Webbook
rinpol	565.80	NIST Webbook
rinpol	569.10	NIST Webbook
rinpol	567.90	NIST Webbook
rinpol	567.00	NIST Webbook
rinpol	569.00	NIST Webbook
rinpol	571.81	NIST Webbook
rinpol	572.68	NIST Webbook
rinpol	573.68	NIST Webbook
rinpol	569.15	NIST Webbook
rinpol	570.34	NIST Webbook
rinpol	566.00	NIST Webbook
rinpol	562.00	NIST Webbook
rinpol	564.00	NIST Webbook
rinpol	565.00	NIST Webbook
rinpol	566.00	NIST Webbook
rinpol	568.00	NIST Webbook
rinpol	567.40	NIST Webbook
rinpol	569.00	NIST Webbook
rinpol	571.00	NIST Webbook
rinpol	562.00	NIST Webbook
rinpol	566.00	NIST Webbook
rinpol	569.00	NIST Webbook
rinpol	566.00	NIST Webbook
rinpol	566.00	NIST Webbook
rinpol	567.00	NIST Webbook

rinpol	570.00	NIST Webbook
rinpol	571.00	NIST Webbook
rinpol	565.00	NIST Webbook
rinpol	567.50	NIST Webbook
rinpol	566.00	NIST Webbook
rinpol	568.00	NIST Webbook
rinpol	570.00	NIST Webbook
rinpol	571.00	NIST Webbook
rinpol	565.00	NIST Webbook
rinpol	566.00	NIST Webbook
rinpol	567.00	NIST Webbook
rinpol	569.00	NIST Webbook
rinpol	568.00	NIST Webbook
rinpol	569.00	NIST Webbook
rinpol	569.00	NIST Webbook
rinpol	567.00	NIST Webbook
rinpol	572.00	NIST Webbook
rinpol	570.00	NIST Webbook
rinpol	558.00	NIST Webbook
rinpol	559.00	NIST Webbook
rinpol	569.00	NIST Webbook
rinpol	567.00	NIST Webbook
rinpol	554.80	NIST Webbook
rinpol	557.90	NIST Webbook
rinpol	565.00	NIST Webbook
rinpol	555.77	NIST Webbook
rinpol	555.77	NIST Webbook
rinpol	561.00	NIST Webbook
rinpol	556.00	NIST Webbook
rinpol	565.40	NIST Webbook
rinpol	564.70	NIST Webbook
rinpol	565.40	NIST Webbook
rinpol	556.31	NIST Webbook
rinpol	558.82	NIST Webbook
rinpol	560.33	NIST Webbook
rinpol	556.20	NIST Webbook
rinpol	558.70	NIST Webbook
rinpol	560.20	NIST Webbook
rinpol	558.00	NIST Webbook
rinpol	558.00	NIST Webbook
rinpol	566.00	NIST Webbook
rinpol	567.00	NIST Webbook
rinpol	566.00	NIST Webbook
rinpol	569.00	NIST Webbook

rinpol	571.00	NIST Webbook
rinpol	569.00	NIST Webbook
rinpol	560.00	NIST Webbook
rinpol	566.00	NIST Webbook
rinpol	569.00	NIST Webbook
rinpol	563.00	NIST Webbook
rinpol	563.00	NIST Webbook
rinpol	567.00	NIST Webbook
rinpol	556.00	NIST Webbook
rinpol	563.00	NIST Webbook
rinpol	564.00	NIST Webbook
rinpol	556.00	NIST Webbook
rinpol	556.00	NIST Webbook
rinpol	555.00	NIST Webbook
rinpol	571.00	NIST Webbook
rinpol	567.00	NIST Webbook
rinpol	565.00	NIST Webbook
rinpol	568.00	NIST Webbook
rinpol	568.00	NIST Webbook
rinpol	569.00	NIST Webbook
rinpol	572.00	NIST Webbook
rinpol	558.00	NIST Webbook
rinpol	567.00	NIST Webbook
rinpol	556.00	NIST Webbook
rinpol	557.70	NIST Webbook
rinpol	553.00	NIST Webbook
rinpol	553.00	NIST Webbook
rinpol	559.00	NIST Webbook
rinpol	560.00	NIST Webbook
rinpol	558.00	NIST Webbook
rinpol	563.00	NIST Webbook
rinpol	567.00	NIST Webbook
rinpol	571.00	NIST Webbook
rinpol	571.00	NIST Webbook
rinpol	571.00	NIST Webbook
rinpol	571.00	NIST Webbook
rinpol	564.40	NIST Webbook
rinpol	569.80	NIST Webbook
rinpol	568.40	NIST Webbook
rinpol	566.30	NIST Webbook
rinpol	567.80	NIST Webbook
rinpol	567.00	NIST Webbook
rinpol	566.10	NIST Webbook
rinpol	565.00	NIST Webbook

rinpol	565.60		NIST Webbook
rinpol	567.30		NIST Webbook
rinpol	566.60		NIST Webbook
rinpol	561.20		NIST Webbook
rinpol	558.00		NIST Webbook
rinpol	568.00		NIST Webbook
rinpol	567.90		NIST Webbook
rinpol	567.00		NIST Webbook
rinpol	564.00		NIST Webbook
rinpol	569.00		NIST Webbook
rinpol	566.00		NIST Webbook
rinpol	571.00		NIST Webbook
rinpol	570.00		NIST Webbook
rinpol	557.00		NIST Webbook
rinpol	567.00		NIST Webbook
rinpol	567.80		NIST Webbook
rinpol	566.20		NIST Webbook
rinpol	567.30		NIST Webbook
rinpol	567.70		NIST Webbook
rinpol	566.30		NIST Webbook
rinpol	567.70		NIST Webbook
rinpol	566.30		NIST Webbook
rinpol	563.00		NIST Webbook
rinpol	573.10		NIST Webbook
rinpol	557.00		NIST Webbook
rinpol	568.40		NIST Webbook
rinpol	567.30		NIST Webbook
rinpol	565.00		NIST Webbook
rinpol	579.60		NIST Webbook
rinpol	573.00		NIST Webbook
rinpol	569.80		NIST Webbook
rinpol	563.00		NIST Webbook
rinpol	559.00		NIST Webbook
rinpol	568.00		NIST Webbook
rinpol	573.20		NIST Webbook
rinpol	564.40		NIST Webbook
rinpol	573.68		NIST Webbook
rinpol	564.00		NIST Webbook
sl	277.52	J/mol×K	NIST Webbook
sl	278.85	J/mol×K	NIST Webbook
tb	331.35 ± 0.50	K	NIST Webbook
tb	331.07 ± 0.20	K	NIST Webbook
tb	331.00 ± 2.00	K	NIST Webbook
tb	331.65 ± 2.00	K	NIST Webbook

tb	331.15 ± 1.00	K	NIST Webbook
tb	331.21 ± 0.20	K	NIST Webbook
tb	331.21 ± 0.15	K	NIST Webbook
tb	331.25 ± 0.50	K	NIST Webbook
tb	331.25 ± 0.30	K	NIST Webbook
tb	331.15 ± 1.00	K	NIST Webbook
tb	331.40 ± 0.60	K	NIST Webbook
tb	331.45 ± 0.50	K	NIST Webbook
tb	331.30 ± 0.40	K	NIST Webbook
tb	331.15 ± 0.50	K	NIST Webbook
tb	331.80 ± 0.50	K	NIST Webbook
tb	330.65 ± 0.30	K	NIST Webbook
tb	331.13	K	KDB
tb	331.16 ± 0.08	K	NIST Webbook
tb	331.20	K	NIST Webbook
tb	331.10	K	NIST Webbook
tb	331.30 ± 0.25	K	NIST Webbook
tb	331.18 ± 0.20	K	NIST Webbook
tb	331.30 ± 0.30	K	NIST Webbook
tb	331.10 ± 0.60	K	NIST Webbook
tb	330.95 ± 0.30	K	NIST Webbook
tb	331.14 ± 0.20	K	NIST Webbook
tb	330.80 ± 0.50	K	NIST Webbook
tb	331.15 ± 0.50	K	NIST Webbook
tb	329.95 ± 1.00	K	NIST Webbook
tb	331.10 ± 0.10	K	NIST Webbook
tb	331.65 ± 1.50	K	NIST Webbook
tb	331.40 ± 0.30	K	NIST Webbook
tb	331.20 ± 0.20	K	NIST Webbook
tb	331.10 ± 0.50	K	NIST Webbook
tb	331.35 ± 0.50	K	NIST Webbook
tb	331.10 ± 0.15	K	NIST Webbook
tb	331.20 ± 0.40	K	NIST Webbook
tb	331.15 ± 1.00	K	NIST Webbook
tb	331.13 ± 0.01	K	NIST Webbook
tb	330.92 ± 0.83	K	NIST Webbook
tb	331.18 ± 0.10	K	NIST Webbook
tb	331.18 ± 0.07	K	NIST Webbook
tb	331.20 ± 0.30	K	NIST Webbook
tb	331.25 ± 0.10	K	NIST Webbook
tb	331.00 ± 0.60	K	NIST Webbook
tb	331.13 ± 0.02	K	NIST Webbook
tb	330.90 ± 0.70	K	NIST Webbook
tb	331.25 ± 0.10	K	NIST Webbook

tb	331.14 ± 0.02	K	NIST Webbook
tb	331.15 ± 0.70	K	NIST Webbook
tb	331.15 ± 0.50	K	NIST Webbook
tb	331.12 ± 0.07	K	NIST Webbook
tb	331.15 ± 0.50	K	NIST Webbook
tb	331.25 ± 0.50	K	NIST Webbook
tb	333.12 ± 0.15	K	NIST Webbook
tb	330.95 ± 0.40	K	NIST Webbook
tb	331.05 ± 0.50	K	NIST Webbook
tb	331.15 ± 0.30	K	NIST Webbook
tb	331.14 ± 0.05	K	NIST Webbook
tb	331.00 ± 1.50	K	NIST Webbook
tb	331.15 ± 1.00	K	NIST Webbook
tb	331.17 ± 0.10	K	NIST Webbook
tb	331.08 ± 0.30	K	NIST Webbook
tb	331.25 ± 0.50	K	NIST Webbook
tb	331.20 ± 0.20	K	NIST Webbook
tb	331.17 ± 0.15	K	NIST Webbook
tb	331.25 ± 0.20	K	NIST Webbook
tb	332.25 ± 1.00	K	NIST Webbook
tb	331.08 ± 0.10	K	NIST Webbook
tb	331.25 ± 0.40	K	NIST Webbook
tb	331.12 ± 0.20	K	NIST Webbook
tb	331.20 ± 0.30	K	NIST Webbook
tb	331.35 ± 0.50	K	NIST Webbook
tb	331.25 ± 0.30	K	NIST Webbook
tc	500.00	K	KDB
tf	144.55 ± 0.06	K	NIST Webbook
tf	137.35 ± 0.60	K	NIST Webbook
tf	138.25 ± 0.40	K	NIST Webbook
tf	138.05 ± 5.00	K	NIST Webbook
tf	144.15 ± 2.00	K	NIST Webbook
tf	144.60 ± 0.60	K	NIST Webbook
tf	145.40 ± 0.30	K	NIST Webbook
tf	144.55 ± 1.00	K	NIST Webbook
tf	144.15 ± 0.50	K	NIST Webbook
tf	127.65 ± 3.00	K	NIST Webbook
tf	136.35 ± 0.30	K	NIST Webbook
tf	144.95 ± 0.30	K	NIST Webbook
tf	144.65 ± 0.30	K	NIST Webbook
tf	144.95 ± 0.30	K	NIST Webbook
tf	144.65 ± 0.30	K	NIST Webbook
tf	144.35 ± 0.20	K	NIST Webbook
tf	145.15 ± 0.10	K	NIST Webbook

tf	144.61 ± 0.05	K	NIST Webbook
tf	144.58 ± 0.08	K	NIST Webbook
tf	144.47 ± 0.20	K	NIST Webbook
tf	144.35 ± 0.01	K	NIST Webbook
tf	137.75 ± 0.50	K	NIST Webbook
tf	143.36 ± 0.05	K	NIST Webbook
tf	144.30	K	KDB
tf	144.45	K	Aqueous Solubility Prediction Method
tf	144.47 ± 0.15	K	NIST Webbook
tf	144.68 ± 0.10	K	NIST Webbook
tf	140.45 ± 3.00	K	NIST Webbook
tf	144.61 ± 0.03	K	NIST Webbook
tf	144.55 ± 0.05	K	NIST Webbook
tf	138.15 ± 1.50	K	NIST Webbook
tt	145.19 ± 0.06	K	NIST Webbook
tt	145.19 ± 0.08	K	NIST Webbook
tt	145.04 ± 0.02	K	NIST Webbook
tt	136.50 ± 0.15	K	NIST Webbook
tt	144.92 ± 0.10	K	NIST Webbook
tt	145.18 ± 0.06	K	NIST Webbook
vc	0.361	m3/kmol	NIST Webbook
vc	0.360 ± 0.001	m3/kmol	NIST Webbook
vc	0.361	m3/kmol	KDB
zc	0.2735340		KDB
zra	0.27		KDB

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	208.24	J/mol×K	471.15	NIST Webbook
cpg	195.52	J/mol×K	436.00	NIST Webbook
cpg	182.55	J/mol×K	402.30	NIST Webbook
cpg	170.25	J/mol×K	371.20	NIST Webbook
cpg	158.07	J/mol×K	341.60	NIST Webbook
cpl	188.80	J/mol×K	298.15	NIST Webbook
cpl	184.35	J/mol×K	298.10	NIST Webbook
cpl	189.04	J/mol×K	298.15	NIST Webbook
cpl	189.02	J/mol×K	298.15	NIST Webbook
cpl	188.77	J/mol×K	298.15	NIST Webbook
cpl	189.70	J/mol×K	298.15	NIST Webbook

cpl	188.74	J/mol×K	298.15	NIST Webbook
cpl	188.77	J/mol×K	298.15	NIST Webbook
cpl	188.67	J/mol×K	298.15	NIST Webbook
dvisc	0.0004635	Pa×s	266.33	Joback Method
dvisc	0.0007919	Pa×s	231.59	Joback Method
dvisc	0.0016346	Pa×s	196.85	Joback Method
dvisc	0.0046023	Pa×s	162.12	Joback Method
dvisc	0.0002214	Pa×s	335.80	Joback Method
dvisc	0.0003070	Pa×s	301.06	Joback Method
dvisc	0.0227903	Pa×s	127.38	Joback Method
hfust	6.43	kJ/mol	136.10	NIST Webbook
hfust	0.79	kJ/mol	145.20	NIST Webbook
hfust	0.79	kJ/mol	145.20	NIST Webbook
hfust	2.37	kJ/mol	107.00	NIST Webbook
hvapt	27.30 ± 0.10	kJ/mol	331.00	NIST Webbook
hvapt	28.30 ± 0.10	kJ/mol	313.00	NIST Webbook
hvapt	28.90 ± 0.10	kJ/mol	303.00	NIST Webbook
hvapt	29.20 ± 0.10	kJ/mol	296.00	NIST Webbook
hvapt	29.24 ± 0.01	kJ/mol	295.80	NIST Webbook
hvapt	29.20 ± 0.10	kJ/mol	293.00	NIST Webbook
hvapt	27.28	kJ/mol	331.20	KDB
hvapt	28.20 ± 0.10	kJ/mol	313.00	NIST Webbook
hvapt	27.00 ± 0.10	kJ/mol	333.00	NIST Webbook
hvapt	26.10 ± 0.10	kJ/mol	353.00	NIST Webbook
hvapt	29.60	kJ/mol	309.50	NIST Webbook
hvapt	27.38	kJ/mol	331.10	NIST Webbook
rfi	1.37231		298.15	KDB
rfi	1.37275		298.15	Liquid liquid equilibria of lactam containing binary systems
rhoI	657.02	kg/m3	298.15	Excess molar enthalpies of ternary mixtures (dibutyl ether or dipropyl ether + 2,2-dimethylbutane + 2,3-dimethylbutane) at the temperature 298.15 K
rhoI	662.00	kg/m3	293.00	KDB
rhoI	662.36	kg/m3	298.15	Excess enthalpies of binary mixtures of 1-hexene with some branched alkanes at the temperature 298.15 K

rhoI	657.10	kg/m ³	298.15	Vapour-liquid equilibria in binary and ternary systems composed of 2,3-dimethylbutane, diisopropyl ether, and 3-methyl-2-butanone at 313.15, 323.15 and 313.15 K
sfust	22.13	J/mol×K	107.00	NIST Webbook
sfust	47.22	J/mol×K	136.10	NIST Webbook
sfust	5.47	J/mol×K	145.20	NIST Webbook
srf	0.02	N/m	298.20	KDB
tcondI	0.09	W/m×K	318.11	Thermal Conductivity and Thermal Diffusivity of Sixteen Isomers of Alkanes: C _n H _{2n+2} (n = 6 to 8)
tcondI	0.09	W/m×K	318.45	Thermal Conductivity and Thermal Diffusivity of Sixteen Isomers of Alkanes: C _n H _{2n+2} (n = 6 to 8)
tcondI	0.09	W/m×K	319.06	Thermal Conductivity and Thermal Diffusivity of Sixteen Isomers of Alkanes: C _n H _{2n+2} (n = 6 to 8)
tcondI	0.10	W/m×K	298.60	Thermal Conductivity and Thermal Diffusivity of Sixteen Isomers of Alkanes: C _n H _{2n+2} (n = 6 to 8)
tcondI	0.10	W/m×K	298.06	Thermal Conductivity and Thermal Diffusivity of Sixteen Isomers of Alkanes: C _n H _{2n+2} (n = 6 to 8)

tcondl	0.10	W/m×K	297.63	Thermal Conductivity and Thermal Diffusivity of Sixteen Isomers of Alkanes: C _n H _{2n+2} (n = 6 to 8)
tcondl	0.11	W/m×K	278.91	Thermal Conductivity and Thermal Diffusivity of Sixteen Isomers of Alkanes: C _n H _{2n+2} (n = 6 to 8)
tcondl	0.11	W/m×K	278.38	Thermal Conductivity and Thermal Diffusivity of Sixteen Isomers of Alkanes: C _n H _{2n+2} (n = 6 to 8)
tcondl	0.11	W/m×K	277.98	Thermal Conductivity and Thermal Diffusivity of Sixteen Isomers of Alkanes: C _n H _{2n+2} (n = 6 to 8)
tcondl	0.11	W/m×K	257.69	Thermal Conductivity and Thermal Diffusivity of Sixteen Isomers of Alkanes: C _n H _{2n+2} (n = 6 to 8)
tcondl	0.11	W/m×K	257.19	Thermal Conductivity and Thermal Diffusivity of Sixteen Isomers of Alkanes: C _n H _{2n+2} (n = 6 to 8)
tcondl	0.09	W/m×K	336.29	Thermal Conductivity and Thermal Diffusivity of Sixteen Isomers of Alkanes: C _n H _{2n+2} (n = 6 to 8)

tcondl	0.09	W/m×K	336.65	Thermal Conductivity and Thermal Diffusivity of Sixteen Isomers of Alkanes: C _n H _{2n+2} (n = 6 to 8)
tcondl	0.09	W/m×K	337.30	Thermal Conductivity and Thermal Diffusivity of Sixteen Isomers of Alkanes: C _n H _{2n+2} (n = 6 to 8)
tcondl	0.11	W/m×K	256.81	Thermal Conductivity and Thermal Diffusivity of Sixteen Isomers of Alkanes: C _n H _{2n+2} (n = 6 to 8)

Correlations

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/(T + C)$
Coeff. A	1.40789e+01
Coeff. B	-2.80917e+03
Coeff. C	-3.41940e+01
Temperature range (K), min.	237.89
Temperature range (K), max.	354.61

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/T + C \cdot \ln(T) + D \cdot T^2$
Coeff. A	7.59442e+01
Coeff. B	-5.89227e+03
Coeff. C	-9.39857e+00
Coeff. D	9.18926e-06
Temperature range (K), min.	145.19
Temperature range (K), max.	499.98

Datasets

Viscosity, Pa*s

Temperature, K - Liquid	Pressure, kPa - Liquid	Viscosity, Pa*s - Liquid
273.15	1000.00	0.0004335
273.16	5000.00	0.0004595
273.14	10000.00	0.0004829
273.17	15000.00	0.0005077
273.15	20000.00	0.0005391
273.16	25000.00	0.0005681
273.17	30000.00	0.0006022
273.15	35000.00	0.0006264
273.16	40000.00	0.0006560
283.12	1000.00	0.0003904
283.13	5000.00	0.0004095
283.15	10000.00	0.0004294
283.15	15000.00	0.0004568
283.14	20000.00	0.0004823
283.14	25000.00	0.0005060
283.14	30000.00	0.0005337
283.14	35000.00	0.0005590
283.16	40000.00	0.0005860
293.15	1000.00	0.0003485
293.15	5000.00	0.0003644
293.15	10000.00	0.0003838
293.14	15000.00	0.0004097
293.14	20000.00	0.0004292
293.15	25000.00	0.0004555
293.15	30000.00	0.0004762
293.15	35000.00	0.0005015
293.15	40000.00	0.0005256
303.18	1000.00	0.0003136
303.17	5000.00	0.0003279
303.17	10000.00	0.0003471
303.16	15000.00	0.0003680
303.16	20000.00	0.0003887
303.13	25000.00	0.0004091
303.15	30000.00	0.0004303
303.15	35000.00	0.0004520

303.15	40000.00	0.0004719
313.14	1000.00	0.0002820
313.14	5000.00	0.0002963
313.14	10000.00	0.0003151
313.13	15000.00	0.0003337
313.14	20000.00	0.0003528
313.13	25000.00	0.0003714
313.15	30000.00	0.0003915
313.16	35000.00	0.0004100
313.16	40000.00	0.0004293
323.17	1000.00	0.0002560
323.17	5000.00	0.0002686
323.17	10000.00	0.0002861
323.16	15000.00	0.0003032
323.16	20000.00	0.0003201
323.16	25000.00	0.0003375
323.16	30000.00	0.0003555
323.16	35000.00	0.0003733
323.16	40000.00	0.0003920
333.16	1000.00	0.0002331
333.16	5000.00	0.0002450
333.16	10000.00	0.0002619
333.16	15000.00	0.0002772
333.15	20000.00	0.0002940
333.15	25000.00	0.0003102
333.15	30000.00	0.0003275
333.16	35000.00	0.0003436
333.16	40000.00	0.0003600
343.15	1000.00	0.0002132
343.15	5000.00	0.0002244
343.15	10000.00	0.0002396
343.15	15000.00	0.0002560
343.15	20000.00	0.0002719
343.15	25000.00	0.0002866
343.15	30000.00	0.0003020
343.15	35000.00	0.0003173
343.15	40000.00	0.0003304

Reference

<https://www.doi.org/10.1021/acs.jced.6b01024>

Mass density, kg/m3

Pressure, kPa - Liquid	Temperature, K - Liquid	Mass density, kg/m3 - Liquid
100.00	283.15	670.76
100.00	288.15	666.22
100.00	293.15	661.58
100.00	298.15	657.0
100.00	303.15	652.31
100.00	308.15	647.61
100.00	313.15	642.78
100.00	318.15	638.08
100.00	323.15	633.18
100.00	328.15	628.26
2000.00	283.15	672.72
2000.00	288.15	668.35
2000.00	293.15	663.76
2000.00	298.15	659.21
2000.00	303.15	654.73
2000.00	308.15	650.13
2000.00	313.15	645.28
2000.00	318.15	640.8
2000.00	323.15	636.04
2000.00	328.15	631.14
5000.00	283.15	675.8
5000.00	288.15	671.5
5000.00	293.15	667.04
5000.00	298.15	662.62
5000.00	303.15	658.23
5000.00	308.15	653.82
5000.00	313.15	649.18
5000.00	318.15	644.77
5000.00	323.15	640.11
5000.00	328.15	635.61
7000.00	283.15	677.77
7000.00	288.15	673.5
7000.00	293.15	669.15
7000.00	298.15	664.81
7000.00	303.15	660.39
7000.00	308.15	656.12
7000.00	313.15	651.62
7000.00	318.15	647.3
7000.00	323.15	642.73

7000.00	328.15	638.3
10000.00	283.15	680.57
10000.00	288.15	676.37
10000.00	293.15	672.12
10000.00	298.15	667.97
10000.00	303.15	663.63
10000.00	308.15	659.42
10000.00	313.15	655.04
10000.00	318.15	650.89
10000.00	323.15	646.47
10000.00	328.15	642.27
20000.00	283.15	689.26
20000.00	288.15	685.39
20000.00	293.15	681.36
20000.00	298.15	677.49
20000.00	303.15	673.54
20000.00	308.15	669.63
20000.00	313.15	665.61
20000.00	318.15	661.8
20000.00	323.15	657.61
20000.00	328.15	653.85
30000.00	283.15	697.12
30000.00	288.15	693.43
30000.00	293.15	689.64
30000.00	298.15	686.05
30000.00	303.15	682.15
30000.00	308.15	678.59
30000.00	313.15	674.74
30000.00	318.15	671.23
30000.00	323.15	667.06
30000.00	328.15	663.86
40000.00	283.15	704.27
40000.00	288.15	700.77
40000.00	293.15	697.12
40000.00	298.15	693.73
40000.00	303.15	690.01
40000.00	308.15	686.72
40000.00	313.15	683.04
40000.00	318.15	679.58
40000.00	323.15	676.08
40000.00	328.15	672.8
50000.00	283.15	710.91
50000.00	288.15	707.56
50000.00	293.15	704.07

50000.00	298.15	700.78
50000.00	303.15	697.16
50000.00	308.15	694.02
50000.00	313.15	690.56
50000.00	318.15	687.47
50000.00	323.15	684.13
50000.00	328.15	680.68
60000.00	283.15	717.08
60000.00	288.15	713.85
60000.00	293.15	710.4
60000.00	298.15	707.39
60000.00	303.15	703.95
60000.00	308.15	700.83
60000.00	313.15	697.4
60000.00	318.15	694.5
60000.00	323.15	691.19
60000.00	328.15	688.05
65000.00	283.15	720.09
65000.00	288.15	716.77
65000.00	293.15	713.55
65000.00	298.15	710.52
65000.00	303.15	707.12
65000.00	308.15	704.06
65000.00	313.15	700.79
65000.00	318.15	697.71
65000.00	323.15	694.58
65000.00	328.15	691.47

Reference <https://www.doi.org/10.1016/j.fluid.2012.11.013>

Sources

KDB Vapor Pressure Data:

<https://www.thermo.com/research/kdb/hcprop/showprop.php?cmpid=38>

Liquid liquid equilibria of lactam containing binary systems: Compressed Liquid Viscosity of 2-Methylpentane, 3-Methylpentane, and 2,3-Dimethylbutane at Temperatures from (273 to 343) K and Pressures up to 50 MPa. Enthalpies of binary mixtures of 1-hexene with some branched alkanes at the temperature range 273.15 K. Binary Systems: Methanol + Cyclohexane and Several Binary and Ternary systems composed of 2,3-dimethylbutane, 2-methylpentane, and 2,3-dimethylbutane at 300 K, 320 K, and 340 K. Binary Systems: Methanol + Cyclohexane and Several Binary and Ternary systems composed of 2,3-dimethylbutane, 2-methylpentane, and 2,3-dimethylbutane at 300 K, 320 K, and 340 K.

<https://www.doi.org/10.1016/j.fluid.2008.02.008>

<https://www.doi.org/10.1021/acs.jced.6b01024>

<https://www.thermo.com/files/research/kdb/mol/mol38.mol>

<https://www.doi.org/10.1016/j.jct.2003.09.004>

<https://www.doi.org/10.1021/je0505321>

<https://www.doi.org/10.1016/j.fluid.2013.01.020>

<https://www.doi.org/10.1016/j.jct.2011.04.006>

<http://pubs.acs.org/doi/abs/10.1021/ci990307l>

Joback Method:	https://en.wikipedia.org/wiki/Joback_method
Aqueous Solubility Prediction Method:	http://onschallenge.wikispaces.com/file/view/AqueousDataset002.xlsx/351826032/AqueousDataset002.xlsx
Excess molar enthalpies of ternary mixtures (1-hexene + tetrahydrofuran + 1,2-dimethylmethane or 2,3-dimethylbutane) at the temperature 298.15 K:	https://www.doi.org/10.1016/j.jct.2010.10.002
McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
Estimated Solubility Method:	http://pubs.acs.org/doi/suppl/10.1021/ci034243x/suppl_file/ci034243xsi20040112_053635.txt
Experimental and VTPR-predicted volumetric properties of branched hexanes:	https://www.doi.org/10.1016/j.fluid.2012.11.013
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C79298&Units=SI
The Yaws Handbook of Vapor Pressure:	https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure
KDB Pure (Korean Thermophysical Properties Databank):	https://www.cheric.org/research/kdb/hcprop/showprop.php?cmpid=38
Thermal Conductivity and Thermal Diffusivity of Sixteen Isomers of Alkanes: C_nH_{2n+2} (n = 6 to 8):	https://www.doi.org/10.1021/je020125e

Legend

af:	Acentric Factor
ap:	Aniline Point
chl:	Standard liquid enthalpy of combustion
cpg:	Ideal gas heat capacity
cpl:	Liquid phase heat capacity
dvisc:	Dynamic viscosity
gf:	Standard Gibbs free energy of formation
gyrad:	Radius of Gyration
hcg:	Heat of Combustion, Gross form
hcn:	Heat of Combustion, Net Form
hf:	Enthalpy of formation at standard conditions
hfl:	Liquid phase enthalpy of formation at standard conditions
hfus:	Enthalpy of fusion at standard conditions
hfust:	Enthalpy of fusion at a given temperature
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
nfpaf:	NFPA Fire Rating
nfpah:	NFPA Health Rating
pc:	Critical Pressure
pvap:	Vapor pressure
rfi:	Refractive Index
rhoc:	Critical density
rhof:	Liquid Density
rinpol:	Non-polar retention indices

sfust:	Entropy of fusion at a given temperature
sl:	Liquid phase molar entropy at standard conditions
srf:	Surface Tension
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tcondl:	Liquid thermal conductivity
tf:	Normal melting (fusion) point
tt:	Triple Point Temperature
vc:	Critical Volume
zc:	Critical Compressibility
zra:	Rackett Parameter

Latest version available from:

<https://www.cheméo.com/cid/60-146-3/Butane-2-3-dimethyl.pdf>

Generated by Cheméo on 2025-12-23 00:49:21.010367194 +0000 UTC m=+6199158.540407849.

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