

Ethanedioic acid, dibutyl ester

Other names:	Butyl ethanedioate Butyl oxalate Dibutyl ester of oxalic acid Oxalic acid di-n-butyl ester di-n-butyl oxalate dibutyl ethanedioate dibutyl oxalate oxalic acid, dibutyl ester
Inchi:	InChI=1S/C10H18O4/c1-3-5-7-13-9(11)10(12)14-8-6-4-2/h3-8H2,1-2H3
InchiKey:	JKRZOJADNVOXPM-UHFFFAOYSA-N
Formula:	C10H18O4
SMILES:	CCCCOC(=O)C(=O)OCCCC
Mol. weight [g/mol]:	202.25
CAS:	2050-60-4

Physical Properties

Property code	Value	Unit	Source
gf	-434.52	kJ/mol	Joback Method
hf	-739.33	kJ/mol	Joback Method
hfus	27.23	kJ/mol	Joback Method
hvap	56.17	kJ/mol	Joback Method
log10ws	-1.73		Crippen Method
logp	1.673		Crippen Method
mcvol	166.640	ml/mol	McGowan Method
pc	2298.11	kPa	Joback Method
rinpol	1325.00		NIST Webbook
rinpol	1320.00		NIST Webbook
rinpol	1320.00		NIST Webbook
rinpol	1321.00		NIST Webbook
rinpol	1359.00		NIST Webbook
rinpol	1359.00		NIST Webbook
rinpol	1319.00		NIST Webbook
rinpol	1321.00		NIST Webbook
tb	518.70 ± 0.50	K	NIST Webbook
tb	512.70	K	NIST Webbook
tc	760.87	K	Joback Method
tf	346.78	K	Joback Method

vc	0.643	m3/kmol	Joback Method
----	-------	---------	---------------

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	415.69	J/mol×K	580.78	Joback Method
cpg	428.88	J/mol×K	610.80	Joback Method
cpg	441.54	J/mol×K	640.81	Joback Method
cpg	453.66	J/mol×K	670.83	Joback Method
cpg	465.23	J/mol×K	700.84	Joback Method
cpg	476.26	J/mol×K	730.86	Joback Method
cpg	486.74	J/mol×K	760.87	Joback Method
dvisc	0.0010682	Pa×s	385.78	Joback Method
dvisc	0.0019074	Pa×s	346.78	Joback Method
dvisc	0.0006655	Pa×s	424.78	Joback Method
dvisc	0.0004489	Pa×s	463.78	Joback Method
dvisc	0.0003219	Pa×s	502.78	Joback Method
dvisc	0.0002421	Pa×s	541.78	Joback Method
dvisc	0.0001892	Pa×s	580.78	Joback Method
pvap	0.01	kPa	318.20	Vapor Pressures and Enthalpies of Vaporization of a Series of the Symmetric Linear n-Alkyl Esters of Dicarboxylic Acids
pvap	1.10e-03	kPa	293.40	Vapor Pressures and Enthalpies of Vaporization of a Series of the Symmetric Linear n-Alkyl Esters of Dicarboxylic Acids
pvap	1.43e-03	kPa	295.70	Vapor Pressures and Enthalpies of Vaporization of a Series of the Symmetric Linear n-Alkyl Esters of Dicarboxylic Acids
pvap	1.82e-03	kPa	298.80	Vapor Pressures and Enthalpies of Vaporization of a Series of the Symmetric Linear n-Alkyl Esters of Dicarboxylic Acids

pvap	2.09e-03	kPa	300.40	Vapor Pressures and Enthalpies of Vaporization of a Series of the Symmetric Linear n-Alkyl Esters of Dicarboxylic Acids	
pvap	2.49e-03	kPa	302.30	Vapor Pressures and Enthalpies of Vaporization of a Series of the Symmetric Linear n-Alkyl Esters of Dicarboxylic Acids	
pvap	2.76e-03	kPa	302.80	Vapor Pressures and Enthalpies of Vaporization of a Series of the Symmetric Linear n-Alkyl Esters of Dicarboxylic Acids	
pvap	2.83e-03	kPa	303.30	Vapor Pressures and Enthalpies of Vaporization of a Series of the Symmetric Linear n-Alkyl Esters of Dicarboxylic Acids	
pvap	3.40e-03	kPa	305.20	Vapor Pressures and Enthalpies of Vaporization of a Series of the Symmetric Linear n-Alkyl Esters of Dicarboxylic Acids	
pvap	3.34e-03	kPa	305.30	Vapor Pressures and Enthalpies of Vaporization of a Series of the Symmetric Linear n-Alkyl Esters of Dicarboxylic Acids	
pvap	4.46e-03	kPa	308.20	Vapor Pressures and Enthalpies of Vaporization of a Series of the Symmetric Linear n-Alkyl Esters of Dicarboxylic Acids	

pvap	4.33e-03	kPa	308.30	Vapor Pressures and Enthalpies of Vaporization of a Series of the Symmetric Linear n-Alkyl Esters of Dicarboxylic Acids
pvap	4.48e-03	kPa	308.40	Vapor Pressures and Enthalpies of Vaporization of a Series of the Symmetric Linear n-Alkyl Esters of Dicarboxylic Acids
pvap	5.65e-03	kPa	311.30	Vapor Pressures and Enthalpies of Vaporization of a Series of the Symmetric Linear n-Alkyl Esters of Dicarboxylic Acids
pvap	6.24e-03	kPa	312.30	Vapor Pressures and Enthalpies of Vaporization of a Series of the Symmetric Linear n-Alkyl Esters of Dicarboxylic Acids
pvap	6.60e-03	kPa	313.20	Vapor Pressures and Enthalpies of Vaporization of a Series of the Symmetric Linear n-Alkyl Esters of Dicarboxylic Acids
pvap	7.37e-03	kPa	314.30	Vapor Pressures and Enthalpies of Vaporization of a Series of the Symmetric Linear n-Alkyl Esters of Dicarboxylic Acids
pvap	8.55e-03	kPa	315.50	Vapor Pressures and Enthalpies of Vaporization of a Series of the Symmetric Linear n-Alkyl Esters of Dicarboxylic Acids

pvap	9.37e-03	kPa	317.40	Vapor Pressures and Enthalpies of Vaporization of a Series of the Symmetric Linear n-Alkyl Esters of Dicarboxylic Acids
pvap	0.01	kPa	317.80	Vapor Pressures and Enthalpies of Vaporization of a Series of the Symmetric Linear n-Alkyl Esters of Dicarboxylic Acids
pvap	8.70e-04	kPa	291.40	Vapor Pressures and Enthalpies of Vaporization of a Series of the Symmetric Linear n-Alkyl Esters of Dicarboxylic Acids
pvap	0.01	kPa	319.90	Vapor Pressures and Enthalpies of Vaporization of a Series of the Symmetric Linear n-Alkyl Esters of Dicarboxylic Acids
pvap	0.01	kPa	320.20	Vapor Pressures and Enthalpies of Vaporization of a Series of the Symmetric Linear n-Alkyl Esters of Dicarboxylic Acids
pvap	0.01	kPa	322.50	Vapor Pressures and Enthalpies of Vaporization of a Series of the Symmetric Linear n-Alkyl Esters of Dicarboxylic Acids
pvap	0.02	kPa	323.20	Vapor Pressures and Enthalpies of Vaporization of a Series of the Symmetric Linear n-Alkyl Esters of Dicarboxylic Acids

pvap	0.02	kPa	323.40	Vapor Pressures and Enthalpies of Vaporization of a Series of the Symmetric Linear n-Alkyl Esters of Dicarboxylic Acids
pvap	0.02	kPa	325.30	Vapor Pressures and Enthalpies of Vaporization of a Series of the Symmetric Linear n-Alkyl Esters of Dicarboxylic Acids
pvap	0.02	kPa	325.30	Vapor Pressures and Enthalpies of Vaporization of a Series of the Symmetric Linear n-Alkyl Esters of Dicarboxylic Acids
pvap	0.02	kPa	326.40	Vapor Pressures and Enthalpies of Vaporization of a Series of the Symmetric Linear n-Alkyl Esters of Dicarboxylic Acids
pvap	0.02	kPa	327.50	Vapor Pressures and Enthalpies of Vaporization of a Series of the Symmetric Linear n-Alkyl Esters of Dicarboxylic Acids
pvap	0.02	kPa	328.20	Vapor Pressures and Enthalpies of Vaporization of a Series of the Symmetric Linear n-Alkyl Esters of Dicarboxylic Acids
pvap	0.02	kPa	328.50	Vapor Pressures and Enthalpies of Vaporization of a Series of the Symmetric Linear n-Alkyl Esters of Dicarboxylic Acids

pvap	0.03	kPa	330.30	Vapor Pressures and Enthalpies of Vaporization of a Series of the Symmetric Linear n-Alkyl Esters of Dicarboxylic Acids
pvap	0.03	kPa	331.10	Vapor Pressures and Enthalpies of Vaporization of a Series of the Symmetric Linear n-Alkyl Esters of Dicarboxylic Acids
pvap	0.03	kPa	331.40	Vapor Pressures and Enthalpies of Vaporization of a Series of the Symmetric Linear n-Alkyl Esters of Dicarboxylic Acids
pvap	0.03	kPa	333.20	Vapor Pressures and Enthalpies of Vaporization of a Series of the Symmetric Linear n-Alkyl Esters of Dicarboxylic Acids
pvap	0.03	kPa	333.50	Vapor Pressures and Enthalpies of Vaporization of a Series of the Symmetric Linear n-Alkyl Esters of Dicarboxylic Acids
pvap	0.03	kPa	333.50	Vapor Pressures and Enthalpies of Vaporization of a Series of the Symmetric Linear n-Alkyl Esters of Dicarboxylic Acids
pvap	0.04	kPa	335.20	Vapor Pressures and Enthalpies of Vaporization of a Series of the Symmetric Linear n-Alkyl Esters of Dicarboxylic Acids

pvap	0.04	kPa	336.30	Vapor Pressures and Enthalpies of Vaporization of a Series of the Symmetric Linear n-Alkyl Esters of Dicarboxylic Acids
pvap	0.04	kPa	337.00	Vapor Pressures and Enthalpies of Vaporization of a Series of the Symmetric Linear n-Alkyl Esters of Dicarboxylic Acids
pvap	0.05	kPa	338.10	Vapor Pressures and Enthalpies of Vaporization of a Series of the Symmetric Linear n-Alkyl Esters of Dicarboxylic Acids
pvap	0.05	kPa	338.60	Vapor Pressures and Enthalpies of Vaporization of a Series of the Symmetric Linear n-Alkyl Esters of Dicarboxylic Acids
pvap	0.05	kPa	340.20	Vapor Pressures and Enthalpies of Vaporization of a Series of the Symmetric Linear n-Alkyl Esters of Dicarboxylic Acids
pvap	0.06	kPa	340.80	Vapor Pressures and Enthalpies of Vaporization of a Series of the Symmetric Linear n-Alkyl Esters of Dicarboxylic Acids
pvap	0.06	kPa	341.40	Vapor Pressures and Enthalpies of Vaporization of a Series of the Symmetric Linear n-Alkyl Esters of Dicarboxylic Acids

pvap	0.07	kPa	343.20	Vapor Pressures and Enthalpies of Vaporization of a Series of the Symmetric Linear n-Alkyl Esters of Dicarboxylic Acids
pvap	0.07	kPa	343.40	Vapor Pressures and Enthalpies of Vaporization of a Series of the Symmetric Linear n-Alkyl Esters of Dicarboxylic Acids
pvap	0.06	kPa	343.50	Vapor Pressures and Enthalpies of Vaporization of a Series of the Symmetric Linear n-Alkyl Esters of Dicarboxylic Acids
pvap	0.07	kPa	345.20	Vapor Pressures and Enthalpies of Vaporization of a Series of the Symmetric Linear n-Alkyl Esters of Dicarboxylic Acids
pvap	0.10	kPa	348.30	Vapor Pressures and Enthalpies of Vaporization of a Series of the Symmetric Linear n-Alkyl Esters of Dicarboxylic Acids
pvap	0.11	kPa	351.20	Vapor Pressures and Enthalpies of Vaporization of a Series of the Symmetric Linear n-Alkyl Esters of Dicarboxylic Acids
pvap	0.13	kPa	353.10	Vapor Pressures and Enthalpies of Vaporization of a Series of the Symmetric Linear n-Alkyl Esters of Dicarboxylic Acids

pvap

0.18

kPa

358.20

Vapor Pressures
and Enthalpies of
Vaporization of a
Series of the
Symmetric Linear
n-Alkyl Esters of
Dicarboxylic
Acids

Sources

Vapor Pressures and Enthalpies of
Vaporization of a Series of the
Symmetric Linear n-Alkyl Esters of
Dicarboxylic Acids:
Joback Method:
McGowan Method:

<https://www.doi.org/10.1021/je100231g>

https://en.wikipedia.org/wiki/Joback_method

<http://link.springer.com/article/10.1007/BF02311772>

NIST Webbook:

<http://webbook.nist.gov/cgi/cbook.cgi?ID=C2050604&Units=SI>

Crippen Method:

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

Crippen Method:

https://www.chemeo.com/doc/models/crippen_log10ws

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
pvap:	Vapor pressure
rinpola:	Non-polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume

Latest version available from:

<https://www.chemeo.com/cid/69-295-9/Ethanedioic-acid-dibutyl-ester.pdf>

Generated by Cheméo on 2025-12-05 09:23:06.098032922 +0000 UTC m=+4674783.628073577.

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