

# Diethylmalonic acid, 2-octyl tridecyl ester

<b>Inchi:</b>	InChI=1S/C28H54O4/c1-6-10-12-14-15-16-17-18-19-20-22-24-31-26(29)28(8-3,9-4)27(3
<b>InchiKey:</b>	WBRFBYYIGPRICL-UHFFFAOYSA-N
<b>Formula:</b>	C28H54O4
<b>SMILES:</b>	CCCCCCCCCCCCOC(=O)C(CC)(CC)C(=O)OC(C)CCCCC
<b>Mol. weight [g/mol]:</b>	454.73

## Physical Properties

Property code	Value	Unit	Source
gf	-282.56	kJ/mol	Joback Method
hf	-1124.88	kJ/mol	Joback Method
hfus	62.91	kJ/mol	Joback Method
hvap	94.55	kJ/mol	Joback Method
log10ws	-9.14		Crippen Method
logp	8.549		Crippen Method
mcvol	420.260	ml/mol	McGowan Method
pc	697.28	kPa	Joback Method
rinpol	2751.00		NIST Webbook
tb	988.95	K	Joback Method
tc	1220.27	K	Joback Method
tf	537.06	K	Joback Method
vc	1.635	m3/kmol	Joback Method

## Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	1474.43	J/molxK	988.95	Joback Method
cpg	1496.42	J/molxK	1027.50	Joback Method
cpg	1516.64	J/molxK	1066.06	Joback Method
cpg	1535.17	J/molxK	1104.61	Joback Method
cpg	1552.12	J/molxK	1143.16	Joback Method
cpg	1567.57	J/molxK	1181.71	Joback Method
cpg	1581.62	J/molxK	1220.27	Joback Method
dvisc	0.0003161	Paxs	537.06	Joback Method
dvisc	0.0001276	Paxs	612.38	Joback Method

dvisc	0.0000628	Paxs	687.69	Joback Method
dvisc	0.0000356	Paxs	763.00	Joback Method
dvisc	0.0000223	Paxs	838.32	Joback Method
dvisc	0.0000151	Paxs	913.63	Joback Method
dvisc	0.0000109	Paxs	988.95	Joback Method

## Sources

<b>Joback Method:</b>	<a href="https://en.wikipedia.org/wiki/Joback_method">https://en.wikipedia.org/wiki/Joback_method</a>
<b>McGowan Method:</b>	<a href="http://link.springer.com/article/10.1007/BF02311772">http://link.springer.com/article/10.1007/BF02311772</a>
<b>NIST Webbook:</b>	<a href="http://webbook.nist.gov/cgi/cbook.cgi?ID=U369373&amp;Units=SI">http://webbook.nist.gov/cgi/cbook.cgi?ID=U369373&amp;Units=SI</a>
<b>Crippen Method:</b>	<a href="http://pubs.acs.org/doi/abs/10.1021/ci990307l">http://pubs.acs.org/doi/abs/10.1021/ci990307l</a>
<b>Crippen Method:</b>	<a href="https://www.chemeo.com/doc/models/crippen_log10ws">https://www.chemeo.com/doc/models/crippen_log10ws</a>

## Legend

<b>cpg:</b>	Ideal gas heat capacity
<b>dvisc:</b>	Dynamic viscosity
<b>gf:</b>	Standard Gibbs free energy of formation
<b>hf:</b>	Enthalpy of formation at standard conditions
<b>hfus:</b>	Enthalpy of fusion at standard conditions
<b>hvap:</b>	Enthalpy of vaporization at standard conditions
<b>log10ws:</b>	Log10 of Water solubility in mol/l
<b>logp:</b>	Octanol/Water partition coefficient
<b>mcvol:</b>	McGowan's characteristic volume
<b>pc:</b>	Critical Pressure
<b>rinpol:</b>	Non-polar retention indices
<b>tb:</b>	Normal Boiling Point Temperature
<b>tc:</b>	Critical Temperature
<b>tf:</b>	Normal melting (fusion) point
<b>vc:</b>	Critical Volume

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