

# Pimelic acid, ethyl octadecyl ester

<b>Inchi:</b>	InChI=1S/C27H52O4/c1-3-5-6-7-8-9-10-11-12-13-14-15-16-17-18-22-25-31-27(29)24-21
<b>InchiKey:</b>	AVMZFXBCOSHIKU-UHFFFAOYSA-N
<b>Formula:</b>	C27H52O4
<b>SMILES:</b>	CCCCCCCCCCCCCCCCCOC(=O)CCCCC(=O)OCC
<b>Mol. weight [g/mol]:</b>	440.70

## Physical Properties

Property code	Value	Unit	Source
gf	-291.38	kJ/mol	Joback Method
hf	-1090.21	kJ/mol	Joback Method
hfus	71.26	kJ/mol	Joback Method
hvap	94.01	kJ/mol	Joback Method
log10ws	-8.85		Crippen Method
logp	8.305		Crippen Method
mvol	406.170	ml/mol	McGowan Method
pc	723.40	kPa	Joback Method
rinpol	3073.00		NIST Webbook
rinpol	3073.00		NIST Webbook
tb	969.74	K	Joback Method
tc	1199.13	K	Joback Method
tf	538.37	K	Joback Method
vc	1.595	m <sup>3</sup> /kmol	Joback Method

## Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	1409.71	J/molxK	969.74	Joback Method
cpg	1431.77	J/molxK	1007.97	Joback Method
cpg	1451.97	J/molxK	1046.20	Joback Method
cpg	1470.38	J/molxK	1084.43	Joback Method
cpg	1487.05	J/molxK	1122.66	Joback Method
cpg	1502.06	J/molxK	1160.89	Joback Method
cpg	1515.46	J/molxK	1199.13	Joback Method
dvisc	0.0003585	Paxs	538.37	Joback Method

dvisc	0.0001634	Paxs	610.26	Joback Method
dvisc	0.0000879	Paxs	682.16	Joback Method
dvisc	0.0000532	Paxs	754.06	Joback Method
dvisc	0.0000352	Paxs	825.95	Joback Method
dvisc	0.0000248	Paxs	897.85	Joback Method
dvisc	0.0000185	Paxs	969.74	Joback Method

## Sources

<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=U406576&amp;Units=SI">http://webbook.nist.gov/cgi/cbook.cgi?ID=U406576&amp;Units=SI</a>
<b>Crippen Method:</b>	<a href="http://pubs.acs.org/doi/abs/10.1021/ci9903071">http://pubs.acs.org/doi/abs/10.1021/ci9903071</a>
<b>Crippen Method:</b>	<a href="https://www.cheméo.com/doc/models/crippen_log10ws">https://www.cheméo.com/doc/models/crippen_log10ws</a>
<b>Joback Method:</b>	<a href="https://en.wikipedia.org/wiki/Joback_method">https://en.wikipedia.org/wiki/Joback_method</a>

## Legend

<b>cp<sub>g</sub>:</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>log<sub>10</sub>ws:</b>	Log <sub>10</sub> of Water solubility in mol/l
<b>logp:</b>	Octanol/Water partition coefficient
<b>m<sub>cvol</sub>:</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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