

# Hexadecanoic acid, dodecyl ester

<b>Other names:</b>	Dodecyl palmitate dodecyl hexadecanoate
<b>Inchi:</b>	InChI=1S/C28H56O2/c1-3-5-7-9-11-13-15-16-17-18-20-22-24-26-28(29)30-27-25-23-21-
<b>InchiKey:</b>	GULIJHQUYGTWSO-UHFFFAOYSA-N
<b>Formula:</b>	C28H56O2
<b>SMILES:</b>	CCCCCCCCCCCCCCCC(=O)CCCCCCCCCCCC
<b>Mol. weight [g/mol]:</b>	424.74
<b>CAS:</b>	42232-29-1

## Physical Properties

Property code	Value	Unit	Source
gf	-49.04	kJ/mol	Joback Method
hf	-866.05	kJ/mol	Joback Method
hfus	71.06	kJ/mol	Joback Method
hvap	87.08	kJ/mol	Joback Method
log10ws	-10.41		Crippen Method
logp	9.932		Crippen Method
mvol	412.820	ml/mol	McGowan Method
pc	671.16	kPa	Joback Method
rinpol	2950.68		NIST Webbook
rinpol	2950.68		NIST Webbook
tb	916.33	K	Joback Method
tc	1129.21	K	Joback Method
tf	477.48	K	Joback Method
vc	1.627	m <sup>3</sup> /kmol	Joback Method

## Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	1416.23	J/mol×K	916.33	Joback Method
cpg	1523.34	J/mol×K	1093.73	Joback Method
cpg	1504.83	J/mol×K	1058.25	Joback Method
cpg	1484.93	J/mol×K	1022.77	Joback Method
cpg	1463.57	J/mol×K	987.29	Joback Method

cpg	1440.70	J/molxK	951.81	Joback Method
cpg	1540.54	J/molxK	1129.21	Joback Method
dvisc	0.0000230	Paxs	916.33	Joback Method
dvisc	0.0000314	Paxs	843.19	Joback Method
dvisc	0.0000457	Paxs	770.05	Joback Method
dvisc	0.0000717	Paxs	696.90	Joback Method
dvisc	0.0001253	Paxs	623.76	Joback Method
dvisc	0.0002539	Paxs	550.62	Joback Method
dvisc	0.0006385	Paxs	477.48	Joback Method

## Sources

<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.chemeo.com/doc/models/crippen_log10ws">https://www.chemeo.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>
<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=C42232291&amp;Units=SI">http://webbook.nist.gov/cgi/cbook.cgi?ID=C42232291&amp;Units=SI</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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