

# Vitamin A palmitate

**Other names:**

Retinol, hexadecanoate

3,7-Dimethyl-9-(2,6,6-trimethyl-1-cyclohexen-1-yl)-2,4,6,8-nonatetraen-1-ol  
palmitate  
Arovit

Ester found in fish liver oils

Optovit-A

retinyl palmitate

**Inchi:**

InChI=1S/C36H60O2/c1-7-8-9-10-11-12-13-14-15-16-17-18-19-25-35(37)38-30-28-32(3)

**InchiKey:**

VYGQUTWHTHXGQB-FFHKNEKCSA-N

**Formula:**

C36H60O2

**SMILES:**

CCCCCCCCCCCCCCCC(=O)OCC=C(C)C=CC=C(C)C=CC1=C(C)CCCC1(C)C

**Mol. weight [g/mol]:**

524.86

**CAS:**

79-81-2

## Physical Properties

Property code	Value	Unit	Source
chs	-21292.10 ± 5.90	kJ/mol	NIST Webbook
gf	351.76	kJ/mol	Joback Method
hf	-477.47	kJ/mol	Joback Method
hfs	-1449.10 ± 5.90	kJ/mol	NIST Webbook
hfus	75.95	kJ/mol	Joback Method
hvap	105.77	kJ/mol	Joback Method
log10ws	-12.68		Crippen Method
logp	11.543		Crippen Method
mcvol	493.180	ml/mol	McGowan Method
pc	579.52	kPa	Joback Method
tb	1144.68	K	Joback Method
tc	1420.22	K	Joback Method
tf	576.48	K	Joback Method
vc	1.915	m <sup>3</sup> /kmol	Joback Method

## Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	1838.42	J/mol×K	1144.68	Joback Method

cpg	1877.94	J/mol×K	1190.60	Joback Method
cpg	1918.62	J/mol×K	1236.53	Joback Method
cpg	1960.94	J/mol×K	1282.45	Joback Method
cpg	2005.36	J/mol×K	1328.37	Joback Method
cpg	2052.36	J/mol×K	1374.29	Joback Method
cpg	2102.41	J/mol×K	1420.22	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=C79812&amp;Units=SI">http://webbook.nist.gov/cgi/cbook.cgi?ID=C79812&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>chs:</b>	Standard solid enthalpy of combustion
<b>cpg:</b>	Ideal gas heat capacity
<b>gf:</b>	Standard Gibbs free energy of formation
<b>hf:</b>	Enthalpy of formation at standard conditions
<b>hfs:</b>	Solid phase 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>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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