

# n-Hexadecanoic acid

**Other names:**

1-Pentadecanecarboxylic acid  
Cetylic acid  
Emersol 140  
Emersol 143  
Glycon P-45  
Hexadecanoic (palmitic) acid  
Hexadecanoic acid  
Hexadecanoic acid (palmitic acid)  
Hexadecylic acid  
Hydrofol  
Hystrene 8016  
Hystrene 9016  
Industrene 4516  
Kortacid 1695  
N-PALMITIC ACID  
NSC 5030  
Palmitic acid  
Palmitic acid (hexadecanoic acid)  
Palmitinic acid  
Pentadecanecarboxylic acid  
Prifac 2960  
n-Hexadecoic acid

**Inchi:**

InChI=1S/C16H32O2/c1-2-3-4-5-6-7-8-9-10-11-12-13-14-15-16(17)18/h2-15H2,1H3,(H,1

**InchiKey:**

IPCSVZSSVZVIGE-UHFFFAOYSA-N

**Formula:**

C16H32O2

**SMILES:**

CCCCCCCCCCCCCCCC(=O)O

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

256.42

**CAS:**

57-10-3

## Physical Properties

Property code	Value	Unit	Source
chl	-10028.60 ± 1.90	kJ/mol	NIST Webbook
chl	-9977.20 ± 1.60	kJ/mol	NIST Webbook
chs	-9977.60 ± 8.80	kJ/mol	NIST Webbook
gf	-181.90	kJ/mol	Joback Method
hf	-730.00 ± 5.50	kJ/mol	NIST Webbook

hfl	-848.40 ± 2.20	kJ/mol	NIST Webbook
hfus	53.50	kJ/mol	Solid-Liquid Equilibrium of Binary Systems Containing Fatty Acids and Fatty Alcohols Using Differential Scanning Calorimetry
hfus	52.55	kJ/mol	Solid-liquid phase equilibria of (n-octadecane with myristic, and palmitic acid) binary mixtures used as phase change materials (PCMs)
hsub	194.00 ± 11.00	kJ/mol	NIST Webbook
hvap	74.64	kJ/mol	Joback Method
log10ws	-6.81		Aqueous Solubility Prediction Method
logp	5.552		Crippen Method
mcvol	243.740	ml/mol	McGowan Method
pc	1468.41 ± 85.00	kPa	NIST Webbook
pt	8.27e-06 ± 4.00e-06	kPa	NIST Webbook
rinpol	1964.00		NIST Webbook
rinpol	1972.00		NIST Webbook
rinpol	1957.00		NIST Webbook
rinpol	1976.00		NIST Webbook
rinpol	1978.00		NIST Webbook
rinpol	1965.00		NIST Webbook
rinpol	1957.00		NIST Webbook
rinpol	2009.00		NIST Webbook
rinpol	1965.00		NIST Webbook
rinpol	1977.00		NIST Webbook
rinpol	1975.00		NIST Webbook
rinpol	1970.00		NIST Webbook
rinpol	1938.00		NIST Webbook
rinpol	1940.00		NIST Webbook
rinpol	1960.00		NIST Webbook
rinpol	1940.00		NIST Webbook
rinpol	1974.00		NIST Webbook
rinpol	1962.00		NIST Webbook
rinpol	1962.00		NIST Webbook
rinpol	1960.00		NIST Webbook
rinpol	1970.00		NIST Webbook
rinpol	1946.00		NIST Webbook
rinpol	1962.00		NIST Webbook
rinpol	1961.00		NIST Webbook
rinpol	1975.00		NIST Webbook
rinpol	1942.00		NIST Webbook
rinpol	1972.00		NIST Webbook

rinpol	2010.00	NIST Webbook
rinpol	1958.00	NIST Webbook
rinpol	1971.00	NIST Webbook
rinpol	1963.00	NIST Webbook
rinpol	1963.00	NIST Webbook
rinpol	1979.00	NIST Webbook
rinpol	1971.00	NIST Webbook
rinpol	1958.00	NIST Webbook
rinpol	1964.00	NIST Webbook
rinpol	1970.00	NIST Webbook
rinpol	1968.00	NIST Webbook
rinpol	1981.00	NIST Webbook
rinpol	1973.00	NIST Webbook
rinpol	1969.00	NIST Webbook
rinpol	2003.00	NIST Webbook
rinpol	1995.50	NIST Webbook
rinpol	1970.00	NIST Webbook
rinpol	1972.00	NIST Webbook
rinpol	1951.00	NIST Webbook
rinpol	1951.00	NIST Webbook
rinpol	1970.00	NIST Webbook
rinpol	1978.00	NIST Webbook
rinpol	1970.00	NIST Webbook
rinpol	1991.00	NIST Webbook
rinpol	1968.00	NIST Webbook
rinpol	1963.00	NIST Webbook
rinpol	1958.00	NIST Webbook
rinpol	1960.00	NIST Webbook
rinpol	1972.00	NIST Webbook
rinpol	1968.00	NIST Webbook
rinpol	1967.00	NIST Webbook
rinpol	1973.00	NIST Webbook
rinpol	1973.00	NIST Webbook
rinpol	1972.00	NIST Webbook
rinpol	1994.00	NIST Webbook
rinpol	1949.00	NIST Webbook
rinpol	1956.00	NIST Webbook
rinpol	1966.00	NIST Webbook
rinpol	1967.00	NIST Webbook
rinpol	1962.00	NIST Webbook
rinpol	1954.00	NIST Webbook
rinpol	1973.00	NIST Webbook
rinpol	1965.00	NIST Webbook
rinpol	1972.00	NIST Webbook

rinpol	1978.00	NIST Webbook
rinpol	1977.00	NIST Webbook
rinpol	1966.00	NIST Webbook
rinpol	1962.00	NIST Webbook
rinpol	1938.00	NIST Webbook
rinpol	1938.00	NIST Webbook
rinpol	1973.00	NIST Webbook
rinpol	1952.00	NIST Webbook
rinpol	1952.00	NIST Webbook
rinpol	1968.00	NIST Webbook
rinpol	1963.00	NIST Webbook
rinpol	1941.00	NIST Webbook
rinpol	1952.00	NIST Webbook
rinpol	1972.00	NIST Webbook
rinpol	1998.93	NIST Webbook
rinpol	1999.89	NIST Webbook
rinpol	1972.00	NIST Webbook
rinpol	1962.00	NIST Webbook
rinpol	1962.00	NIST Webbook
rinpol	1966.00	NIST Webbook
rinpol	1980.00	NIST Webbook
rinpol	1950.00	NIST Webbook
rinpol	1982.00	NIST Webbook
rinpol	1939.00	NIST Webbook
rinpol	1942.00	NIST Webbook
rinpol	1942.00	NIST Webbook
rinpol	1943.00	NIST Webbook
rinpol	1938.97	NIST Webbook
rinpol	1951.00	NIST Webbook
rinpol	2001.00	NIST Webbook
rinpol	2000.00	NIST Webbook
rinpol	1956.00	NIST Webbook
rinpol	1950.00	NIST Webbook
rinpol	1951.00	NIST Webbook
rinpol	1973.00	NIST Webbook
rinpol	1973.00	NIST Webbook
rinpol	1975.00	NIST Webbook
rinpol	1968.20	NIST Webbook
rinpol	1969.00	NIST Webbook
rinpol	1971.00	NIST Webbook
rinpol	1963.50	NIST Webbook
rinpol	2010.00	NIST Webbook
rinpol	1975.00	NIST Webbook
rinpol	1970.00	NIST Webbook

rinpol	1941.00	NIST Webbook
rinpol	1966.00	NIST Webbook
rinpol	1956.00	NIST Webbook
rinpol	1956.00	NIST Webbook
rinpol	1965.00	NIST Webbook
rinpol	1951.00	NIST Webbook
rinpol	1973.00	NIST Webbook
rinpol	1968.00	NIST Webbook
rinpol	1969.00	NIST Webbook
rinpol	1981.00	NIST Webbook
rinpol	1962.00	NIST Webbook
rinpol	1963.00	NIST Webbook
rinpol	1963.00	NIST Webbook
rinpol	1960.00	NIST Webbook
rinpol	1951.00	NIST Webbook
rinpol	1958.00	NIST Webbook
rinpol	1945.00	NIST Webbook
rinpol	1963.00	NIST Webbook
rinpol	1943.00	NIST Webbook
rinpol	1951.00	NIST Webbook
rinpol	1968.00	NIST Webbook
rinpol	1968.00	NIST Webbook
rinpol	1963.00	NIST Webbook
rinpol	1953.00	NIST Webbook
rinpol	1963.00	NIST Webbook
rinpol	1963.00	NIST Webbook
rinpol	1963.00	NIST Webbook
rinpol	1963.00	NIST Webbook
rinpol	1981.00	NIST Webbook
rinpol	1968.00	NIST Webbook
rinpol	1963.00	NIST Webbook
rinpol	1968.00	NIST Webbook
rinpol	1962.00	NIST Webbook
rinpol	1968.00	NIST Webbook
rinpol	1943.00	NIST Webbook
rinpol	1976.00	NIST Webbook
rinpol	1942.00	NIST Webbook
rinpol	1951.00	NIST Webbook
rinpol	1963.00	NIST Webbook
rinpol	1984.00	NIST Webbook
rinpol	1945.00	NIST Webbook
rinpol	1991.00	NIST Webbook
rinpol	1944.00	NIST Webbook
rinpol	1978.00	NIST Webbook

rinpol	1960.00	NIST Webbook
rinpol	1971.00	NIST Webbook
rinpol	1976.00	NIST Webbook
rinpol	1981.00	NIST Webbook
rinpol	1974.00	NIST Webbook
rinpol	2001.00	NIST Webbook
rinpol	1968.00	NIST Webbook
rinpol	1967.00	NIST Webbook
rinpol	1963.00	NIST Webbook
rinpol	1933.00	NIST Webbook
rinpol	1984.00	NIST Webbook
rinpol	1965.00	NIST Webbook
rinpol	1954.00	NIST Webbook
rinpol	1960.00	NIST Webbook
rinpol	1968.00	NIST Webbook
rinpol	1968.00	NIST Webbook
rinpol	1978.00	NIST Webbook
rinpol	1959.60	NIST Webbook
rinpol	1937.00	NIST Webbook
rinpol	1937.00	NIST Webbook
rinpol	1936.00	NIST Webbook
rinpol	1936.00	NIST Webbook
rinpol	1949.00	NIST Webbook
rinpol	1940.00	NIST Webbook
rinpol	1935.00	NIST Webbook
rinpol	1970.00	NIST Webbook
rinpol	1931.00	NIST Webbook
rinpol	1931.00	NIST Webbook
rinpol	1973.00	NIST Webbook
rinpol	1955.00	NIST Webbook
rinpol	1974.00	NIST Webbook
rinpol	1993.00	NIST Webbook
rinpol	1970.00	NIST Webbook
rinpol	1983.00	NIST Webbook
rinpol	1959.00	NIST Webbook
rinpol	1967.00	NIST Webbook
rinpol	2009.00	NIST Webbook
rinpol	1981.00	NIST Webbook
rinpol	1997.00	NIST Webbook
rinpol	1981.00	NIST Webbook
rinpol	1969.00	NIST Webbook
rinpol	1940.00	NIST Webbook
rinpol	1968.00	NIST Webbook
rinpol	1967.00	NIST Webbook

rinpol	1939.00	NIST Webbook
rinpol	1959.00	NIST Webbook
rinpol	1978.00	NIST Webbook
rinpol	1970.00	NIST Webbook
rinpol	1972.20	NIST Webbook
rinpol	1959.00	NIST Webbook
rinpol	1978.00	NIST Webbook
rinpol	1981.00	NIST Webbook
rinpol	1936.00	NIST Webbook
rinpol	1967.00	NIST Webbook
rinpol	1968.00	NIST Webbook
rinpol	1968.00	NIST Webbook
rinpol	1949.00	NIST Webbook
rinpol	1958.00	NIST Webbook
rinpol	1962.00	NIST Webbook
rinpol	1965.00	NIST Webbook
rinpol	1971.00	NIST Webbook
rinpol	1976.00	NIST Webbook
rinpol	1977.00	NIST Webbook
rinpol	1965.00	NIST Webbook
rinpol	1970.00	NIST Webbook
rinpol	1975.00	NIST Webbook
rinpol	1968.00	NIST Webbook
rinpol	1937.00	NIST Webbook
rinpol	1955.00	NIST Webbook
rinpol	1950.00	NIST Webbook
rinpol	1973.00	NIST Webbook
rinpol	1984.00	NIST Webbook
rinpol	1960.00	NIST Webbook
rinpol	1946.00	NIST Webbook
rinpol	1946.00	NIST Webbook
rinpol	1977.00	NIST Webbook
rinpol	1945.00	NIST Webbook
rinpol	1980.00	NIST Webbook
rinpol	1962.00	NIST Webbook
rinpol	1958.00	NIST Webbook
rinpol	1976.00	NIST Webbook
rinpol	1963.00	NIST Webbook
rinpol	1965.00	NIST Webbook
rinpol	1970.00	NIST Webbook
rinpol	1937.00	NIST Webbook
rinpol	1937.00	NIST Webbook
rinpol	1965.00	NIST Webbook
rinpol	1986.00	NIST Webbook

rinpol	1983.00	NIST Webbook
rinpol	1956.00	NIST Webbook
rinpol	1974.00	NIST Webbook
rinpol	1944.00	NIST Webbook
rinpol	1953.00	NIST Webbook
rinpol	1946.00	NIST Webbook
rinpol	1936.00	NIST Webbook
rinpol	1967.00	NIST Webbook
rinpol	1963.00	NIST Webbook
rinpol	1946.00	NIST Webbook
rinpol	1941.00	NIST Webbook
rinpol	1944.00	NIST Webbook
rinpol	1969.00	NIST Webbook
rinpol	1957.00	NIST Webbook
rinpol	1961.00	NIST Webbook
rinpol	1964.00	NIST Webbook
rinpol	1947.00	NIST Webbook
rinpol	1957.00	NIST Webbook
rinpol	1944.00	NIST Webbook
rinpol	1950.00	NIST Webbook
rinpol	1973.00	NIST Webbook
rinpol	1975.00	NIST Webbook
rinpol	1992.00	NIST Webbook
rinpol	1956.00	NIST Webbook
rinpol	1964.00	NIST Webbook
rinpol	1977.00	NIST Webbook
rinpol	1964.00	NIST Webbook
rinpol	1978.00	NIST Webbook
rinpol	1961.00	NIST Webbook
rinpol	1967.00	NIST Webbook
rinpol	1964.00	NIST Webbook
rinpol	1953.00	NIST Webbook
rinpol	1929.00	NIST Webbook
rinpol	1980.00	NIST Webbook
rinpol	1962.00	NIST Webbook
rinpol	1952.00	NIST Webbook
rinpol	1967.00	NIST Webbook
rinpol	1984.00	NIST Webbook
rinpol	1987.00	NIST Webbook
rinpol	1949.00	NIST Webbook
rinpol	1980.00	NIST Webbook
rinpol	1968.00	NIST Webbook
rinpol	1937.00	NIST Webbook
rinpol	1942.00	NIST Webbook

rinpol	1917.00	NIST Webbook
rinpol	1967.00	NIST Webbook
rinpol	1973.00	NIST Webbook
rinpol	1957.00	NIST Webbook
rinpol	1984.00	NIST Webbook
rinpol	1984.00	NIST Webbook
rinpol	1977.00	NIST Webbook
rinpol	1940.00	NIST Webbook
rinpol	1953.00	NIST Webbook
rinpol	1978.00	NIST Webbook
rinpol	2010.00	NIST Webbook
rinpol	1958.00	NIST Webbook
rinpol	1962.00	NIST Webbook
rinpol	1981.00	NIST Webbook
rinpol	1957.00	NIST Webbook
rinpol	1957.00	NIST Webbook
rinpol	2010.00	NIST Webbook
rinpol	1969.00	NIST Webbook
rinpol	1972.00	NIST Webbook
rinpol	1951.00	NIST Webbook
rinpol	1960.00	NIST Webbook
rinpol	1962.00	NIST Webbook
rinpol	1957.00	NIST Webbook
rinpol	1965.00	NIST Webbook
rinpol	1957.00	NIST Webbook
rinpol	1973.00	NIST Webbook
rinpol	1972.00	NIST Webbook
rinpol	1960.00	NIST Webbook
rinpol	1948.00	NIST Webbook
rinpol	1948.00	NIST Webbook
rinpol	1961.00	NIST Webbook
rinpol	1957.00	NIST Webbook
rinpol	1977.00	NIST Webbook
rinpol	1975.00	NIST Webbook
rinpol	1960.00	NIST Webbook
rinpol	1975.00	NIST Webbook
rinpol	1980.00	NIST Webbook
rinpol	1962.00	NIST Webbook
rinpol	1983.00	NIST Webbook
rinpol	1942.00	NIST Webbook
rinpol	1964.00	NIST Webbook
rinpol	1958.00	NIST Webbook
rinpol	1973.00	NIST Webbook
rinpol	1981.00	NIST Webbook

rinpol	1943.00	NIST Webbook
rinpol	1961.00	NIST Webbook
rinpol	1945.00	NIST Webbook
rinpol	1973.00	NIST Webbook
rinpol	1980.00	NIST Webbook
rinpol	1973.00	NIST Webbook
rinpol	324.00	NIST Webbook
rinpol	336.70	NIST Webbook
rinpol	336.70	NIST Webbook
rinpol	336.90	NIST Webbook
rinpol	322.20	NIST Webbook
rinpol	321.88	NIST Webbook
rinpol	321.57	NIST Webbook
rinpol	325.15	NIST Webbook
rinpol	1965.00	NIST Webbook
rinpol	1981.00	NIST Webbook
rinpol	1951.00	NIST Webbook
rinpol	1963.00	NIST Webbook
rinpol	1968.00	NIST Webbook
rinpol	1943.00	NIST Webbook
rinpol	1984.00	NIST Webbook
rinpol	1960.00	NIST Webbook
rinpol	2001.00	NIST Webbook
rinpol	1936.00	NIST Webbook
rinpol	1970.00	NIST Webbook
rinpol	1974.00	NIST Webbook
rinpol	1967.00	NIST Webbook
rinpol	1969.00	NIST Webbook
rinpol	1959.00	NIST Webbook
rinpol	1978.00	NIST Webbook
rinpol	1971.00	NIST Webbook
rinpol	1975.00	NIST Webbook
rinpol	1973.00	NIST Webbook
rinpol	1977.00	NIST Webbook
rinpol	1976.00	NIST Webbook
rinpol	1937.00	NIST Webbook
rinpol	1957.00	NIST Webbook
rinpol	1968.20	NIST Webbook
rinpol	1956.00	NIST Webbook
rinpol	1964.00	NIST Webbook
rinpol	1953.00	NIST Webbook
rinpol	1940.00	NIST Webbook
rinpol	1962.00	NIST Webbook
rinpol	324.00	NIST Webbook

ripol	1961.00	NIST Webbook
ripol	1946.00	NIST Webbook
ripol	1958.00	NIST Webbook
ripol	1972.00	NIST Webbook
ripol	1966.00	NIST Webbook
ripol	1952.00	NIST Webbook
ripol	1939.00	NIST Webbook
ripol	1944.00	NIST Webbook
ripol	1979.00	NIST Webbook
ripol	2930.00	NIST Webbook
ripol	2910.00	NIST Webbook
ripol	2940.00	NIST Webbook
ripol	2922.00	NIST Webbook
ripol	2880.00	NIST Webbook
ripol	2890.00	NIST Webbook
ripol	2871.00	NIST Webbook
ripol	2931.00	NIST Webbook
ripol	2876.00	NIST Webbook
ripol	2917.00	NIST Webbook
ripol	2931.00	NIST Webbook
ripol	2931.00	NIST Webbook
ripol	2931.00	NIST Webbook
ripol	2931.00	NIST Webbook
ripol	2931.00	NIST Webbook
ripol	2931.00	NIST Webbook
ripol	2900.00	NIST Webbook
ripol	2931.00	NIST Webbook
ripol	2931.00	NIST Webbook
ripol	2931.00	NIST Webbook
ripol	2890.00	NIST Webbook
ripol	2931.00	NIST Webbook
ripol	2931.00	NIST Webbook
ripol	2910.00	NIST Webbook
ripol	2890.00	NIST Webbook
ripol	2886.00	NIST Webbook
ripol	2919.00	NIST Webbook
ripol	2923.00	NIST Webbook
ripol	2888.00	NIST Webbook
ripol	2880.00	NIST Webbook
ripol	2928.00	NIST Webbook
ripol	2899.00	NIST Webbook
ripol	2931.00	NIST Webbook
ripol	2954.00	NIST Webbook
ripol	2922.00	NIST Webbook

ripol	2899.00	NIST Webbook
ripol	2900.00	NIST Webbook
ripol	2910.00	NIST Webbook
ripol	2946.00	NIST Webbook
ripol	2940.00	NIST Webbook
ripol	2886.00	NIST Webbook
ripol	2871.00	NIST Webbook
ripol	2930.00	NIST Webbook
ripol	2886.00	NIST Webbook
ripol	2886.00	NIST Webbook
ripol	2916.00	NIST Webbook
ripol	2903.00	NIST Webbook
ripol	2912.00	NIST Webbook
ripol	2931.00	NIST Webbook
ripol	2892.00	NIST Webbook
ripol	2900.00	NIST Webbook
ripol	2911.00	NIST Webbook
ripol	2920.00	NIST Webbook
ripol	2906.00	NIST Webbook
ripol	2913.00	NIST Webbook
ripol	2905.00	NIST Webbook
ripol	2894.00	NIST Webbook
ripol	2931.00	NIST Webbook
ripol	2931.00	NIST Webbook
ripol	2886.00	NIST Webbook
ripol	2931.00	NIST Webbook
ripol	2913.00	NIST Webbook
ripol	2931.00	NIST Webbook
ripol	2931.00	NIST Webbook
ripol	2929.00	NIST Webbook
ripol	2875.00	NIST Webbook
ripol	2887.00	NIST Webbook
ripol	2931.00	NIST Webbook
ripol	2880.00	NIST Webbook
ripol	2931.00	NIST Webbook
ripol	2931.00	NIST Webbook
ripol	2912.00	NIST Webbook
ripol	2876.00	NIST Webbook
ripol	2886.00	NIST Webbook
ripol	2931.00	NIST Webbook
ripol	2931.00	NIST Webbook
ripol	2931.00	NIST Webbook
ripol	2931.00	NIST Webbook
ripol	2931.00	NIST Webbook
ripol	2871.00	NIST Webbook



tf	334.85	K	Prediction of the properties of eutectic fatty acid phase change materials
tf	337.22	K	The solid liquid phase diagrams of binary mixtures of even saturated fatty acids differing by six carbon atoms
tf	337.17	K	Solid-liquid phase equilibrium diagrams of binary mixtures containing fatty acids, fatty alcohol compounds and tripalmitin using differential scanning calorimetry
tf	336.84	K	Measurement and PC-SAFT modeling of solid-liquid equilibrium of deep eutectic solvents of quaternary ammonium chlorides and carboxylic acids
tf	335.80	K	Solubilities of Palmitic Acid in Pure Solvents and Its Mixtures
tf	336.00	K	Study of the Effect of Pressure on Melting Behavior of Saturated Fatty Acids in Liquid or Supercritical Carbon Dioxide
tf	335.02	K	Solid Liquid Equilibrium of Binary Mixtures Containing Fatty Acids and Triacylglycerols
tf	336.70	K	Solid-Liquid Equilibria in Fatty Acid/Triglycerol Systems
tf	335.44	K	Solid-Liquid Equilibrium of Binary Fatty Acid Mixtures
tf	335.90	K	Solid Liquid Equilibria in the Binary Systems of Saturated Fatty Acids or Triglycerides (C12 to C18) + Hexadecane
tf	334.92	K	Aqueous Solubility Prediction Method
tt	335.66 ± 0.02	K	NIST Webbook
tt	336.13	K	Solubility Measurement of Lauric, Palmitic, and Stearic Acids in Ethanol, n-Propanol, and 2-Propanol Using Differential Scanning Calorimetry
tt	336.25	K	Form-stable phase change nanocomposites for thermal energy storage based on hypercrosslinked polymer nanospheres

tt	335.05 ± 0.50	K	NIST Webbook
vc	0.957	m <sup>3</sup> /kmol	Joback Method

## Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	765.59	J/mol×K	795.85	Joback Method
cpg	735.78	J/mol×K	739.64	Joback Method
cpg	751.03	J/mol×K	767.74	Joback Method
cpg	779.46	J/mol×K	823.96	Joback Method
cpg	792.69	J/mol×K	852.07	Joback Method
cpg	805.28	J/mol×K	880.17	Joback Method
cpg	719.80	J/mol×K	711.53	Joback Method
cps	448.00	J/mol×K	298.00	NIST Webbook
cps	460.66	J/mol×K	298.15	NIST Webbook
cps	462.30	J/mol×K	292.50	NIST Webbook
cps	463.36	J/mol×K	298.15	NIST Webbook
cps	678.00	J/mol×K	373.00	NIST Webbook
dvisc	0.0000936	Paxs	601.30	Joback Method
dvisc	0.0000353	Paxs	711.53	Joback Method
dvisc	0.0000552	Paxs	656.41	Joback Method
dvisc	0.0035737	Paxs	380.83	Joback Method
dvisc	0.0010179	Paxs	435.95	Joback Method
dvisc	0.0001767	Paxs	546.18	Joback Method
dvisc	0.0003844	Paxs	491.06	Joback Method
hfust	51.37	kJ/mol	332.70	NIST Webbook
hfust	47.00	kJ/mol	336.50	NIST Webbook
hfust	53.00	kJ/mol	334.70	NIST Webbook
hfust	54.81	kJ/mol	335.70	NIST Webbook
hfust	54.81	kJ/mol	335.70	NIST Webbook
hfust	54.94	kJ/mol	336.00	NIST Webbook
hfust	54.89	kJ/mol	335.73	NIST Webbook
hfust	53.90	kJ/mol	335.40	NIST Webbook
hsubt	154.00	kJ/mol	305.00	NIST Webbook
hsubt	154.00 ± 4.20	kJ/mol	319.64	NIST Webbook
hsubt	154.40 ± 4.20	kJ/mol	326.50	NIST Webbook
hsubt	134.00	kJ/mol	288.00	NIST Webbook
hvapt	110.20 ± 2.00	kJ/mol	360.50	NIST Webbook
hvapt	90.10	kJ/mol	475.00	NIST Webbook

hvapt	121.60	kJ/mol	298.00	Vapor Pressures and Vaporization, Sublimation, and Fusion Enthalpies of Some Fatty Acids
hvapt	97.50	kJ/mol	532.50	NIST Webbook
pvap	9.33	kPa	533.40	Vapor pressure data for fatty acids obtained using an adaptation of the DSC technique
pvap	8.00	kPa	527.90	Vapor pressure data for fatty acids obtained using an adaptation of the DSC technique
pvap	1.33	kPa	483.30	Vapor pressure data for fatty acids obtained using an adaptation of the DSC technique
pvap	4.00	kPa	509.00	Vapor pressure data for fatty acids obtained using an adaptation of the DSC technique
pvap	5.33	kPa	517.30	Vapor pressure data for fatty acids obtained using an adaptation of the DSC technique
pvap	6.67	kPa	523.40	Vapor pressure data for fatty acids obtained using an adaptation of the DSC technique
pvap	2.67	kPa	498.60	Vapor pressure data for fatty acids obtained using an adaptation of the DSC technique
sfust	163.50	J/molxK	336.00	NIST Webbook
sfust	163.50	J/molxK	335.73	NIST Webbook

## Pressure Dependent Properties

Property code	Value	Unit	Pressure [kPa]	Source
---------------	-------	------	----------------	--------

tbp	483.15	K	1.20	Vapour liquid equilibria of monocaprylin plus palmitic acid or methyl stearate at P = (1.20 and 2.50) kPa by using DSC technique
tbp	498.35	K	2.50	Vapour liquid equilibria of monocaprylin plus palmitic acid or methyl stearate at P = (1.20 and 2.50) kPa by using DSC technique
tbrp	544.70	K	13.30	NIST Webbook

## Correlations

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/(T + C)$
Coeff. A	1.68013e+01
Coeff. B	-6.05915e+03
Coeff. C	-1.14803e+02
Temperature range (K), min.	481.72
Temperature range (K), max.	642.15

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/T + C \cdot \ln(T) + D \cdot T^2$
Coeff. A	-4.22801e+00
Coeff. B	-8.29052e+03
Coeff. C	3.66210e+00
Coeff. D	-3.66517e-06
Temperature range (K), min.	335.66
Temperature range (K), max.	776.00

## Sources

- Solubility of Vitamin E Acetate in Supercritical Carbon Dioxide: Densities and Correlation: <https://www.doi.org/10.1021/acs.jced.7b00550>
- Form-stable phase change nanocomposites for thermal energy storage based on hydrogen-bonded octadecane/polyethylene Super-critical CO<sub>2</sub> With and Without Cosolvents: <http://pubs.acs.org/doi/abs/10.1021/ci9903071>
- Experimental determination of the (vapor + liquid) equilibrium data of 1-Hexadecane + methyl palmitate (methyl stearate) in the presence of glycerol (solubility) and density measurements of palmitic acid in supercritical carbon dioxide and its mixtures: <https://www.doi.org/10.1016/j.tca.2018.05.005>
- Solid-liquid phase equilibria of (n-octadecane with myristic, and palmitic acids of binary mixtures used as Triglycerides in 1-Ethanol + CO<sub>2</sub>): The Yaws Handbook of Vapor Pressure: <https://www.doi.org/10.1021/je8007149>
- Physical properties of systems of interest to the edible oil industry: Nano-inclusion and a self-thermo-responsive enhancement of palmitic acid in supercritical CO<sub>2</sub>: <http://webbook.nist.gov/cgi/cbook.cgi?ID=C571103&Units=SI>
- Phase diagrams of binary mixtures containing saturated fatty acids in supercritical carbon dioxide: <https://www.doi.org/10.1016/j.jct.2009.07.008>
- Phase diagrams of binary mixtures containing saturated fatty acids in supercritical carbon dioxide: <https://www.doi.org/10.1016/j.fluid.2013.06.027>
- Phase diagrams of binary mixtures containing saturated fatty acids in supercritical carbon dioxide: <https://www.doi.org/10.1016/j.fluid.2009.11.007>
- Phase diagrams of binary mixtures containing saturated fatty acids in supercritical carbon dioxide: <https://www.doi.org/10.1021/je8005979>
- Phase diagrams of binary mixtures containing saturated fatty acids in supercritical carbon dioxide: <https://www.doi.org/10.1016/j.jct.2016.05.008>
- Phase diagrams of binary mixtures containing saturated fatty acids in supercritical carbon dioxide: <https://www.doi.org/10.1021/je201181k>
- Phase diagrams of binary mixtures containing saturated fatty acids in supercritical carbon dioxide: <https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure>
- Phase diagrams of binary mixtures containing saturated fatty acids in supercritical carbon dioxide: <https://www.doi.org/10.1016/j.jct.2017.06.012>
- Phase diagrams of binary mixtures containing saturated fatty acids in supercritical carbon dioxide: <https://www.doi.org/10.1016/j.tca.2019.178309>
- Phase diagrams of binary mixtures containing saturated fatty acids in supercritical carbon dioxide: <https://www.doi.org/10.1021/acs.jced.8b01006>
- Phase diagrams of binary mixtures containing saturated fatty acids in supercritical carbon dioxide: <https://www.doi.org/10.1021/je400260c>
- Phase diagrams of binary mixtures containing saturated fatty acids in supercritical carbon dioxide: <https://www.doi.org/10.1016/j.fluid.2019.05.020>
- Phase diagrams of binary mixtures containing saturated fatty acids in supercritical carbon dioxide: <https://www.doi.org/10.1021/acs.jced.7b00620>
- Phase diagrams of binary mixtures containing saturated fatty acids in supercritical carbon dioxide: <https://www.doi.org/10.1021/je060146z>
- Aqueous Solubility Prediction Method: <http://onschallenge.wikispaces.com/file/view/AqueousDataset002.xlsx/351826032/AqueousDataset002.xlsx>
- Activity coefficient at infinite dilution measurements for organic solutes in supercritical carbon dioxide: <https://www.doi.org/10.1016/j.jct.2012.06.009>
- Prediction of the appearance of eutectic fatty acid phase change materials: <https://www.doi.org/10.1016/j.tca.2017.12.024>
- Apparent Molar Volumes and Viscosities of Lauric, Palmitic, and Stearic Acids in Binary Fatty Acid + CO<sub>2</sub> Systems: <https://www.doi.org/10.1021/je025538u>
- Measurement and PC-SAFT modeling of solid-liquid equilibrium of deep eutectic solvents of binary mixtures of saturated fatty acids in supercritical carbon dioxide: <https://www.doi.org/10.1021/je101092j>
- Measurement and PC-SAFT modeling of solid-liquid equilibrium of deep eutectic solvents of binary mixtures of saturated fatty acids in supercritical carbon dioxide: <https://www.doi.org/10.1016/j.fluid.2017.04.007>
- Measurement and PC-SAFT modeling of solid-liquid equilibrium of deep eutectic solvents of binary mixtures of saturated fatty acids in supercritical carbon dioxide: <https://www.doi.org/10.1016/j.tca.2009.06.018>
- Solid Liquid Equilibrium of Binary Mixtures Containing Fatty Acids and Glycerol: <https://www.doi.org/10.1016/j.jct.2009.08.001>
- Solid Liquid Equilibrium of Binary Mixtures Containing Fatty Acids and Capsaicin in Supercritical Carbon Dioxide: <https://www.doi.org/10.1021/je200033b>
- Solid Liquid Equilibrium of Binary Mixtures Containing Fatty Acids and Capsaicin in Supercritical Carbon Dioxide: <https://www.doi.org/10.1021/acs.jced.7b00576>
- Phase Equilibria of Long-Chain Carboxylic Acids in Supercritical CO<sub>2</sub>: [https://en.wikipedia.org/wiki/Joback\\_method](https://en.wikipedia.org/wiki/Joback_method)
- Phase Equilibria of Long-Chain Carboxylic Acids in Supercritical CO<sub>2</sub>: <https://www.doi.org/10.1021/je101077v>
- Phase Equilibria of Long-Chain Carboxylic Acids in Supercritical CO<sub>2</sub>: <https://www.doi.org/10.1021/acs.jced.6b00355>
- Phase Equilibria of Long-Chain Carboxylic Acids in Supercritical CO<sub>2</sub>: <https://www.doi.org/10.1021/je300902c>
- Phase Equilibria of Long-Chain Carboxylic Acids in Supercritical CO<sub>2</sub>: <https://www.thermo.com/research/kdb/hcprop/showprop.php?cmpid=950>
- Solubility Measurement of Lauric, Palmitic, and Stearic Acids in Ethanol, n-Propyl, and n-Butyl Systems: <https://www.doi.org/10.1021/acs.jced.8b01044>
- Solubility Measurement of Lauric, Palmitic, and Stearic Acids in Ethanol, n-Propyl, and n-Butyl Systems: <https://www.doi.org/10.1021/acs.jced.8b00996>
- Solubility Measurement of Lauric, Palmitic, and Stearic Acids in Ethanol, n-Propyl, and n-Butyl Systems: <https://www.doi.org/10.1016/j.tca.2012.07.034>
- Solubility Measurement of Lauric, Palmitic, and Stearic Acids in Ethanol, n-Propyl, and n-Butyl Systems: <http://link.springer.com/article/10.1007/BF02311772>
- Vapour liquid equilibria of monocaprylin plus palmitic acid or methyl stearate at P = (1.20 and 2.50) kPa by using DSC technique: <https://www.doi.org/10.1016/j.jct.2015.07.033>

# Legend

<b>chl:</b>	Standard liquid enthalpy of combustion
<b>chs:</b>	Standard solid enthalpy of combustion
<b>cpg:</b>	Ideal gas heat capacity
<b>cps:</b>	Solid phase 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>hfl:</b>	Liquid phase enthalpy of formation at standard conditions
<b>hfus:</b>	Enthalpy of fusion at standard conditions
<b>hfust:</b>	Enthalpy of fusion at a given temperature
<b>hsub:</b>	Enthalpy of sublimation at standard conditions
<b>hsubt:</b>	Enthalpy of sublimation at a given temperature
<b>hvap:</b>	Enthalpy of vaporization at standard conditions
<b>hvapt:</b>	Enthalpy of vaporization at a given temperature
<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>pt:</b>	Triple Point Pressure
<b>pvap:</b>	Vapor pressure
<b>rinpol:</b>	Non-polar retention indices
<b>ripol:</b>	Polar retention indices
<b>sfust:</b>	Entropy of fusion at a given temperature
<b>ss:</b>	Solid phase molar entropy at standard conditions
<b>tb:</b>	Normal Boiling Point Temperature
<b>tbp:</b>	Boiling point at given pressure
<b>tbrp:</b>	Boiling point at reduced pressure
<b>tc:</b>	Critical Temperature
<b>tf:</b>	Normal melting (fusion) point
<b>tt:</b>	Triple Point Temperature
<b>vc:</b>	Critical Volume

Latest version available from:

<https://www.cheméo.com/cid/49-300-4/n-Hexadecanoic-acid.pdf>

Generated by Cheméo on 2024-04-16 21:26:05.453183652 +0000 UTC m=+15592014.373760964.

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