

B.P. are more reliable than M.P. for measuring intermolecular forces - SEE GRAPH

→ increase of attraction due to v.d.W. increase

	ALKANES	ALKENES	ALCOHOLS	ALDEHYDES	KETONES	CARB. ACIDS	ETHERS
1	methane CH <sub>4</sub> M.P. -183 D.P. -162		methyl alcohol -CH M.P. -97 D.P. 65	formaldehyde H <sub>2</sub> C=O M.P. -92 D.P. -20		formic acid HCOOH M.P. -8 D.P. 107	
2	ethane -183 D.P. -89	ethene =	ethyl alcohol -OH M.P. -115 D.P. 78.5	acetaldehyde CH <sub>3</sub> CHO M.P. -121 D.P. 20		acetic acid CH <sub>3</sub> COOH M.P. -17 D.P. 118	diethyl ether -O- M.P. -140 D.P. -24
3	propane -182 D.P. -42	propene =	n-propyl alcohol -OH M.P. -127 D.P. 97	propanal CH <sub>3</sub> CH <sub>2</sub> CHO M.P. -81 D.P. 49	dimethyl ketone (acetone) CH <sub>3</sub> COCH <sub>3</sub> M.P. -94 D.P. 56	propanoic acid CH <sub>3</sub> CH <sub>2</sub> COOH M.P. -2 D.P. 144	
4	butane -138 D.P. -0.5	1-butene =	n-butyl alcohol -OH M.P. -90 D.P. 117	butanal CH <sub>3</sub> CH <sub>2</sub> CH <sub>2</sub> CHO M.P. -99 D.P. 76	ethyl methyl ketone CH <sub>3</sub> COCH <sub>2</sub> CH <sub>3</sub> M.P. -86 D.P. 80	butanoic acid CH <sub>3</sub> CH <sub>2</sub> CH <sub>2</sub> COOH M.P. -6 D.P. 164	diethyl ether -O- M.P. -116 D.P. 35
5	pentane -129 D.P. 36	1-pentene =	n-pentyl alcohol -OH M.P. -79 D.P. 138	pentanal CH <sub>3</sub> (CH <sub>2</sub> ) <sub>3</sub> CHO M.P. -91 D.P. 133	diethyl ketone CH <sub>3</sub> CH <sub>2</sub> COCH <sub>2</sub> CH <sub>3</sub> M.P. -48 D.P. 103	pentanoic acid CH <sub>3</sub> (CH <sub>2</sub> ) <sub>3</sub> COOH M.P. -34 D.P. 186	
6	hexane -95 D.P. 69	1-hexene =	n-hexyl alcohol -OH M.P. -47 D.P. 158	hexanal CH <sub>3</sub> (CH <sub>2</sub> ) <sub>4</sub> CHO M.P. -56 D.P. 128		hexanoic acid CH <sub>3</sub> (CH <sub>2</sub> ) <sub>4</sub> COOH M.P. -3 D.P. 205	diisopropyl ether -O- M.P. -60 D.P. 69
7	heptane -91 D.P. 98	1-heptene =	n-heptyl alcohol -OH M.P. -34 D.P. 176	heptanal CH <sub>3</sub> (CH <sub>2</sub> ) <sub>5</sub> CHO M.P. -42 D.P. 154	diisopropyl ketone CH <sub>3</sub> (CH <sub>2</sub> ) <sub>2</sub> COCH <sub>2</sub> (CH <sub>2</sub> ) <sub>2</sub> CH <sub>3</sub> M.P. -85 D.P. 151	heptanoic acid CH <sub>3</sub> (CH <sub>2</sub> ) <sub>5</sub> COOH M.P. -8 D.P. 223	
8	octane -57 D.P. 126	1-octene =	n-octyl alcohol -OH M.P. -17 D.P. 195	octanal CH <sub>3</sub> (CH <sub>2</sub> ) <sub>6</sub> CHO M.P. 171		octanoic acid CH <sub>3</sub> (CH <sub>2</sub> ) <sub>6</sub> COOH M.P. 11 D.P. 239	di-t-butyl ether -O- M.P. D.P.

v.d.W. v.d.W. v.d.W. v.d.W. v.d.W. v.d.W. v.d.W. v.d.W.  
dipole dipole dipole dipole dipole dipole  
H-bond H-bond H-bond H-bond H-bond H-bond H-bond H-bond