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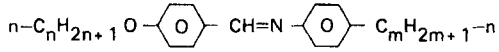
BENZILIDENE ANILIN DERIVATIVES

• **4-alkoxy benzylidene 4'-alkylanilines (1)**



(1) See separate following table with recent results from ref. 169

n	m	K		N		I	Ref.
1	2	•	57 *3.4*	•	[28]	•	2, 15 bis
1	3	•	45.5 *3.6*	•	60.5	•	2, 15 bis
1	4	•	22 *3.2*	•	47	•	2, 15 bis
		•	21 *3.6*	•	48.5 *0.10*	•	24
		•	20	•	47 *0.086*	•	3
		•	20.9 *3.30*	•	46.6 *0.075*	•	25, 26
		•		•	42.5 *0.032*	•	26 bis
		•	22.6 *3.36*	•	46.0	•	167
		•	?	•	42 *0.885*	•	184
		•	20.4 *4.0*	•	46 *0.10*	•	185
		•	22.1 *5.6*	•	11	•	
		•	19.5 *3.063*	•	?	•	187
1	5	•	38 *3.2*	•	58	•	2, 15 bis
		•	39.2 *5.43*	•	62.4 *0.160*	•	25, 26
		•	39.5 *4.868*	•		•	187

n	m	K		N		I	Ref.
1	6	•	35.2 *6.9*	•	53.7	•	2, 15 bis
		•	34.8 *35.3* *6.58*	•	52.4 *0.160*	•	25, 26
1	7	•	27.3 *9.1*	•	62.8	•	2, 15 bis
		•	35 *8.06*	•	62.4 *0.150*	•	25, 26
		•	[27.2] *4.33*	•	id.	•	

n	m	K		S_I	N		I	Ref.
1	8	•	48.8 49.3 *7.37*	–	•	58.4 *0.110*	•	25, 26
2	2	•	67 *4.7*	–	•	70	•	2, 15 bis
		•	62 *4.321*	•	•		•	187
2	3	•	76 *3.5*	–	•	97	•	2, 15 bis
2	4	•	37 *5.8*	–	•	80	•	2, 15 bis
		•	34.5 *3.4*	–	•	79.3 *0.14*	•	24
		•	35.2 *4.12*	–	•	78.4 *0.125*	•	25, 26
		•	36.0 *4.1*	–	•	79.5	•	167
		•	33.5 *4.7*	–	•	79.8 *0.14*	•	185
		•	35.7	–	•	"	•	
		•	34.5 *5.930*	–	•	?	•	187
		•	34.1 *4.45*	–	•	80.3 *0.15*	•	205
		•	36.3 *3.61*	–	•	"	•	
2	5	•	63.3 *6.0*	–	•	90.4	•	2, 15 bis
		•	62.8 63.3 *5.88*	–	•	89.6 *0.260*	•	25, 26
		•	63 *5.934*	–	•		•	187

n	m	K		S_I		N		I	Ref.
2	6	•	39.6 *7.4*	–		•	80.2	•	2, 15 bis
		•	39.2 39.6 *6.2*	–		•	80 *0.210*	•	25, 26
2	7	•	52.5 *6.7*	–		•	86.2	•	2, 15 bis
		•	52.4 52.9 *6.29*	–		•	93.4 *0.190*	•	25, 26
2	8	•	47.2 47.6 *7.42*	–		•	80.4 *0.150*	•	25, 26
3	3	•	57.5 *3.8*	–		•	68	•	2, 15 bis
3	4^1	•	41.1 *5.5*	•	[23.3]	•	55.7	•	2, 15 bis
		•	40 *6.5*	–		•	58.4 *0.11*	•	24
		K_1 •	40.8 41.1 *6.53*	–		•	55.2 *0.100*	•	25, 26
		K_2 •	15.2	•	[23.2]	•	55.2	•	
3	5^1	•	32.7 *2.5*	•	[23.6]	•	71.1	•	2, 15 bis
		K_1 •	32.9 *4.55*	–		•	70.4 *0.220*	•	25, 26
		K_2 •	[12]	•	[23.2]	•	70.4	•	
3	6^1	•	40.7 *7.4*	•	[19.8]	•	62.8	•	2, 15 bis
		K_1 •	40.4 40.7 *6.51*	–		•	62.4 *0.110*	•	25, 26
		K_2 •	[19.6]	•	[23.6]	•	62.4	•	

n	m	K	S_1	N	I	Ref.
3	7^1	• 30.6 *7.7*	• [20.0]	• 70.0	•	2, 15 bis
		K_1 • 30.4 30.6 *6.98*	–	• 69.2 *0.110*	•	25, 26
		K_2 • [5.6]	• [19.6]	• 69.2	•	
3	8^1	K_1 • 38.4	–	• 64.8 *0.210*	•	25, 26
		K_2 • [9.6]	• [19.2]	• 64.8	•	
		K_5 29 *0.81* K_4 32 *0.45* K_3 36 *3.95* K_2 38 *2.46* K_1 38.9 *1.6* N				

n	m	K	S_4	S_3	S_2	S_1	N	I	Ref.
4	$2^{[19]}$	• 40.5 *1.9*	–	–	–	• 51	• 65.5	•	2, 15 bis
		• 39 *0.68*	–	–	–	• 48 *1.97*	• 62.5 *0.152*	•	27
		• 41 *1.676*	–	–	–	–	•	•	187
4	3	• 54 *3.2*	–	–	–	–	• 82.5	•	2, 15 bis
		• 24 *1.772*	–	–	–	–	•	•	187
4	4^2	• 8 *0.8*	• 41.0	• 45.2	–	• 45.7	• 74.7	•	2, 15 bis
		K_1 8 *0.41* K_2 12 *0.45*	• 40.3 *0.220*	• 44.4	–	• 45.6	• 74.0 *0.170*	•	25, 26
						• 43 *0.93*	• 73.4 *0.19*	•	
4	$4^{[16][18]}$	•	?	• 42.4	• 45.6	• 45.8	• 75.2	•	174
			• 41 *3.027*	• 0.13	• 0.73	• ?	•	•	187
4	5^3	• 28 *1.8*	–	• 30	• 41.5	• 44.4	• 84.6	•	2, 15 bis
		• 28 *1.0*	–	• 30	• 41.0 *2.03*	• 44.0	• 84.0 *0.28*	•	25, 26
		• 39.5 *3.402*			?		• ?	•	187
4	6^4	• 26 *0.8*	–	• 47.3	–	• 54.7	• 76.9	•	2, 15 bis
		• 26	–	• 47.2 *0.590*	–	• 54.8 *0.200*	• 76.8 *0.220*	•	25, 26
		K_3 7 *1.0*	K_2 22 *0.05*	K_1 26 *2.13*	S_2				
4	7^{20}	• 20 *0.4*	• 29	• 48.8	–	• 56.5	• 83.3	•	2, 15 bis
		• 19.6 20 *1.58*	• 28.6 *0.96*	• 48.4 *0.540*	–	• 56 < 0.1	• 82.8 *0.280*	•	

n	m	K	S_4	S	S_3	S_2	S_1	N	I	Ref.
4	8[5]	• 32.8 33 *8.9*	–	–	• 49.2 *0.50*	–	• 63.2 *0.08*	• 78.4 *0.28*	•	25,26
		• 32.0	–	–	• 49.5 *0.502*	–	• 63.7 *0.083*	• 79.0 *0.280*	•	3
		• 31.1	–	–	• 48.6	–	• 62.5 *0.83*	• 77.8	•	28
		• 38.0 *1.15*	–	–	• 49.76 *0.43*		• 63.773 *0.001*	• 78.48 *0.01-0.07*	•	180
5	2	• 56 *3.6*	–	–	–	–	–	• 61	•	2,15 bis
5	3	• 57 *2.3*	–	–	–	–	–	• 74.5	•	2,15 bis
5	4[6]	• 24 *0.8*	–	–	–	• 52	• 54	• 71	•	2,15 bis
		• 12 *2.0*	–	–	–	• 51.6	• 52.4	• 68.0 *0.230*	•	25,26
							• 50 *0.36*	• 69.4 *0.23*	•	24
							• 52.6 *1.65*	• 69.9 *0.19*	•	185
5	4[1,6]					• 51.6 *1.1*	• 52.1	• 68.9	•	174
5	5[7]	• 29 *0.5*	• 46	–	• 48	• 52	• 53.6	• 77.5	•	2,15 bis
		• 28.9 29 *1.7*	• 45.6 *0.094*	–	• 48 *0.50*	• 51.4	• 53.6 *0.05*	• 76.8 *0.21*	•	25,26
5	6[8]	• 36 *5.0*	• 40.8	• 43.4	• 51.0	• 52.8	• 61.4	• 73.0	•	2,15 bis
		• 36 *5.53*	• 40.8 *0.028*	• 43.2 *0.054*	• 50.8 *0.570*	• 52.6	• 61.2 *0.280*	• 72.4 *0.340*	•	25,26
5	6[1,7]		• 39.8	• 42.8	• 50.6 *0.55*	• 52.3	• 61	• 72.9	•	174

n	m	K	S_4	S	S_3	S_2	S_1	N	I	Ref.
5	7[9]	• 29 *0.6*	■ 37.3	–	• 52.1	• 55.4	• 64.0	• 78	•	2, 15 bis
		• 28.8	• 36.8 *0.07*	–	• 51.6 *0.560*	• 55.2	• 63.8 *0.10*	• 77.4 *0.340*	•	25
		K_4 12 *1.75*	K_3 19 *1.4*	K_2 25 *0.24*	K_1 29.5 *0.65*	S_4				
5	7[17]			• 37.1	• 51.7 *0.52*	• 55.0	• 63.8	• 77.8	•	174
5	8[10]	• 42.8 43.2 *8.54*	–	–	• 53.2 *0.540*	–	• 64.8 *0.170*	• 74.4 *0.280*	•	25, 26
5	8[16]					• 52.2 *0.55*	• 66.5	• 73.9	•	174
6	2	• 59 *3.7*	–	–	–	–	–	• 71.5	•	2,15 bis
6	3[11]	• 65 *3.5*	–	–	–	–	• 66.5	• 82.5	•	2,15 bis
		K_1 28	K_2 34 *1.62*	S_1 64 *1.26*	S_A 67 *0.23*	N 83 *0.26*	I			29
			S_2 [–9] *0.23*	S_1						
6	4[12]	• 10 *2.2*	–	• 55.4	• 58.2	–	• 69.2	• 77.0	•	2,15 bis
		• 9.6 10 *0.26*	–	• 54.4 *0.130*	• 57.6 *0.690*	–	• 68.6 *0.540*	• 76.0 *0.380*	•	25,26
							• 67 *0.38*	• 76.8 *0.27*	•	
6	4[16,18]				• 55.2 *0.10*	• 58.3 *0.66*	• 69.4	• 71.0	•	174

n	m	K	S_4	S	S_3	S_2	S_1	N	I	Ref.
6	5^{28}	• 40 *3.8*	–	• 45.2	• 61.6	–	• 75.2	• 85.2	•	2,15 bis
		• 39.2 40 *2.3*	–	• 44.4 *0.08*	• 60.8 *0.650*	–	• 74.4 *0.350*	• 84.4 *0.310*	•	25,26
6	6^{29}	• 15 *0.7*	–	• 35	• 62.9	–	• 77.0	• 80.7	•	2,15 bis
		• 14.8 15 *2.85*	–	• 34.8	• 64.4 *0.650*	–	• 76.4 *0.60*	• 80.4 *0.450*	•	25,26
6	7^{10}	• 27 *0.4*	–	–	• 66.0	–	• 81.3	• 85.3	•	2,15 bis
		• 26.4 27 *2.46*	–	–	• 65.6 *0.730*	–	• 80.8 *0.510*	• 84.4 *0.580*	•	

n	m	K		S_4		S_3		S_2		S_1		N		I		Ref.
6	8^{10}	K_2 – 5 *1.5*	K_1 29 *6.36*	–		•	66 *0.160*	–		•	81.2 *0.100*	•	82 *0.180*	•		25, 26
7	2^{22}	•	58 *3.7*	–		–		–		•	64	•	70	•		2, 15 bis
7	3	•	62.5 *2.5*	–		–		–		•	71.5	•	79.5	•		2, 15 bis
7	4^{13}	•	31.5 *8.1*	•	62.5	–		•	63.6	•	73	•	75.5	•		2, 15 bis
		•	31.8 32.2 *7.22*	•	62.4 *0.950*	–		•	63.6 *0.046*	•	72.4 *0.600*	•	75.6 *0.370*	•		25, 26
7	4^{17}					•	59.9 *1.0*	•	64.0	•	71.4	•	73.9	•		174
		•	31.5 *7.65*	•	62.5 *0.12*	–		•	63.5	•	73	•	75.2	•		
7	5^{14}	•	23 *5.4*	•	58	•	64.4	•	68.3	•	79.6	•	83.2	•		2, 15 bis
		•	22.4 23 *3.23*	•	57.2 *0.060*	•	64 *0.710*	•	67.6 *0.040*	•	79.4 *0.680*	•	82.4 *0.510*	•		25, 26
7	5^{17}			•	57.0	•	63.2 *0.64*	•	67.9	•	80.0	•	83.0	•		174
7	6^{15}	•	40.4 *3.6*	–		•	66.9	•	69.7	•	80.2	–		•		2, 15 bis
		•	40.4 *8.76*	–		•	66.4 *0.770*	•	69.2	•	79.2 *1.240*	–		•		25, 26
7	6	•	40 *9.4*	•	58 *0.05*	•	66 *0,70*	•	70 *0.06*	•	80 *1.2*	–		•		175
7	7^{14}	•	33 *8.2*	•	55	•	69.0	•	72.0	•	83.7	•	84	•		2, 15 bis
		K_1 28 *0.45*	K_2 32.6 *4.02*	•	54.4	•	68.4	• *0.440*	71.6	•	83.2 $<$ *1.260*	•	84	•		25, 26

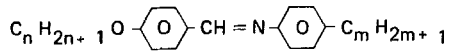
n	m	K		S_4		S_3		S_2		S_1		N		I		Ref.
7	7^{17}			•	54.9	•	68.6 *0.75*	•	71.6	•	83.5	•	83.8	•		174
		•	34.0 *7.5*	•	55.0 *< 0.1*	•	68.7 *0.7*	•	71.7	•	83.4 *1.2*	•	83.7	•		196
7	8^{10}	•	47.6 48.1 *9.74*	–		•	69.2 *0.730*	–		•	82 *1.280*	–		•		25, 26
8	2	•	65 *6.1*	–		–		–		•	71	•	75	•		2, 15 bis
8	3	•	54 *5.5*	–		•	[54]	•	70	•	83	•	85	•		2, 15 bis
8	4	•	39.5 *5.0*	–		•	66	•	69.5	•	83.5	–		•		2, 15 bis
8	$4^{16,18}$					•	62.9 *0.07*	•	67.5 *0.92*	•	80.8	–		•		174

For compounds with n = 8 and m > 4, only melting heats ΔH_m are known, from ref. 15 bis :

m	5	6	7
ΔH_m	8.4	12.9	16.1

Foot notes :

1. S_1 : unidentified smectic phase — mosaïc texture.
2. $S_1 = S_A$, $S_3 = S_B$ from textures, ref. 25, S_4 unidentified smectic phase, S_B is a crystal B phase, ref. 234, 235.
3. unidentified smectic phases.
4. $S_1 = S_A$, $S_3 = S_B$ from textures, ref. 25.
5. $S_1 = S_A$, $S_3 = S_B$ from texture ref. 25 and from structures determined by X-ray investigation, ref. 28 bis, crystal B phase, ref. 234, 235.
6. $S_1 = S_A$ from texture, ref. 25.
   S_2 unidentified smectic phase.
7. $S_1 = S_A$, $S_2 = S_C$ from textures, ref. 25
   S_3, S_4 unidentified smectic phases.
8. $S_1 = S_A$, $S_2 = S_C$ from textures, ref. 25 $S_3 = S_B$ from texture, ref. 26 and S_B from X-ray structure investigation, ref. 28 bis.
   $S_4 = S_G$ from X-ray structure investigation
   S unidentified smectic phase.
9. $S_1 = S_A$, $S_2 = S_C$ from textures, ref. 25 $S_3 = S_B$ from texture, ref. 25 and S_B from X-ray structure investigation, ref. 28 bis, crystal B phase, ref. 234, 235.
   $S_4 = S_G$ from X-ray structure investigation, ref. 28 bis.
10. $S_1 = S_A$, $S_3 = S_B$ from textures, ref. 25.
11. $S_1 = S_H$ from X-ray structure investigation, ref. 29
    S_2 unidentified phase, not surely a liquid cristallyne one ref. 29.
12. $S_1 = S_A$, $S_3 = S_B$ from textures, ref. 25, crystal B phase, réf. 234, 235. S unidentified smectic phase.
13. $S_1 = S_A$, $S_2 = S_C$ from isobaric phase diagram, ref. 29 bis
    $S_4 = S_G$ from X-ray structure investigation, ref. 28 bis
14. $S_1 = S_A$, $S_2 = S_C$ from isobaric phase diagram, ref. 29 bis
    $S_3 = S_B$ from texture ref. 25 and S_B from X-ray structure investigation, ref. 28 bis, crystal B phase, ref. 234, 235.
    $S_4 = S_G$ from X-ray structure investigation, ref. 28.
15. $S_1 = S_A$, $S_2 = S_C$ from textures, ref. 25, S_3 unidentified smectic phase.
16. $S_1 = S_A$, $S_2 = S_B$ from contact method and X-ray studies, ref. 174 p. 65.
17. $S_1 = S_C$, $S_3 = S_B$ or S_G, from contact method and X-ray studies, ref. 174 p. 68.
18. $S_2 = S_B$, ref. 174 p. 69.
19. $S_1 = S_G$ ref. 232, 233.
20. $S_1 = S_A$, $S_3 = S_B$ from textures, ref. 25, S_4 unidentified smectic phase.
21. $S_1 = S_A$, S_3 = from textures, ref. 25, unidentified smectic phase.
22. S_1 = crystal B phase, ref. 234, 235.



n	m	K	S_G	S_B	S_C	S_A	N	I	Ref. (1)
4	2	• 38.7 39.6 *2.6*	• 50.5 51 *1.8*	–	–	–	• 64.8 64.3 *0.16*	•	169
5	2	• 49.2 49.7 *5.1*	• 54.2 54.2 *2.0*	–	–	–	• 59 58.4 *0.15*	•	169
6	2	• 41.6 41.7 *4.5*	• 58.7 58.6 *1.9*	–	–	–	• 69.1 68.5 *0.25*	•	169
7	2	• 67.3 no measurements	–	–	–	–	• [44.3]	•	169
8	2	• 57.2 56.1 *6.8*	–	• [57] [55.7] *0.42*	–	• 68 66 *0.45*	• 71.4 69.9 *0.29*	•	169
9	2	• 63 62.5 *7.0*	–	• [61.5] [59.8] *0.66*	–	• 71.3 70.2 *1.4*	–	•	169
10	2	• 61.5 59.8 *6.8*	–	• 66.2 6.6 *0.80*	–	• 77 76.8 *1.6*	–	•	169
4	4	• 9 9.4 *0.79*	• 38.5 38.4 *0.16*	• 44.2 45 *0.70*	–	• 45.1 45.5 *0.11*	• 74.3 79.4 *0.22*	•	169
5	4	• 20 34 *4.95*	• 51.9 52 *1.1*	–	–	• 52.4 52.4 *0.12*	• 69.2 68.7 *0.26*	•	169
6	4	• ? 32.1 *5.0*	• 57 57.6 *0.16*	• 59.2 59.5 *0.71*	–	• 69.7 69.5 *0.40*	• 78 77.6 *0.29*	•	169
7	4	• 32.6 36.2 *7.6*	• 63.9 63.5 *0.88*	–	• 65.2 64.8 (a)	• 74.5 74.2 *0.51*	• 76.5 76.2 *0.32*	•	169
8	4	• 39.5 40.2 *6.7*	• 62.5 62.3 *0.05*	• 66.5 66.8 *0.83*	–	• 80.5 80.2 *1.4*	–	•	169
5	5	• 28 27 *1.5*	• 46.1 47.4 *0.18*	• 48 48 *0.38*	• 52 51.7 *0.06*	• 53 53.2 *0.03*	• 77.5 77.1 *0.27*	•	169
5	6	• 35.2 34.5 *6.15*	• 40.2(b) 41 *0.02*	• 51.3 51.6 *0.51*	• 52.8 53 (a)	• 61.2 61.1 *0.23*	• 73 72.9 *0.28*	•	169

n	m	K	S_G	S_B	S_C	S_A	N	I	Ref. (1)
5	7	• 29.5 34.5 *5.8*	• 33.9 36.3 *0.07*	• 51 51.9 *0.48*	• 53.1 54.3 (a)	• 62.8 62.9 *0.13*	• 78 77 *0.37*	•	169
5	8	• 43.2 43.2 *8.5*	• [26.3] [26.6] *0.03*	• 53.7 53.7 *0.50*	–	• 67.8 67.2 *0.22*	• 75.1 74.5 *0.34*	•	169
6	1	• 57.2 59.5 *7.0*	• [44]	• [52.9] [53.3] *1.3*	–	–	• 73.7 73.3 *0.25*	•	169
6	3	• ? ?	• 60.8 60.6 *1.05*	–	–	• 67.7 67.3 *0.33*	• 80.7 80.2 *0.29*	•	169
6	5	• ? 41.9 *5.9*	• 41 45.6 *0.11*	• 61.3 62 *0.66*	–	• 75 75.1 *0.28*	• 85 85 *0.40*	•	169
6	6	• 15 12.4 *2.6*	• 35 29 *0.003*	• 61.8 61 *0.60*	–	• 76.5 75.6 *0.42*	• 79.9 79 *0.33*	•	169
6	8	• 28.5 30.3 *7.25*	• [13.5] (c) (c)	• 65.3 65.6 *0.64*	–	• 81.2 81.2 *0.45*	• 82.2 82 *0.42*	•	169
7	5	• 25.2 21.7 *3.3*	• 56.4 56.4 *0.06*	• 64 64.2 *0.65*	• 68.2 67.8 (a)	• 79.6 79.2 *0.37*	• 83.2 83.8 *0.40*	•	169
7	6	• 38.5 36.8 *8.1*	• 54.7 56.1 *0.009*	• 66 65.7 *0.62*	• 69.4 69.1 (a)	• 80.6 80.1 *1.3*	–	•	169
7	7	• 33.2 35.4 *7.2*	• 51 51.5 *0,025*	• 65.4 65.3 *0.57*	• 70.3 70.1 (a)	• 83 83 *0.44*	• 84 83.8 *0.41*	•	169
7	8	• 48 47.6 *10.4*	• 53 55.3 *0.02*	• 69 68.5 *0.68*	• 70.3 70.1 (a)	• 83 82.9 *1.4*	–	•	169

(1) For each compound :

First line : transition temperatures according to the microscopic observation.

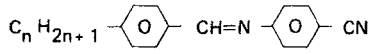
Second line : transition temperatures from the DSC investigations.

(a) S_C - S_A transition with only a jump in the C_p curve ; no latent heat.

(b) Additional transitions S_4/S_B with the values : 43.0°/44.3°/0.05 kcal mol^{-1} .

(c) S_G - S_B transition : not detected by DSC.

4 n alkyl benzyliden 4' cyano anilin

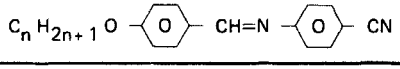


n	K_1	K_2	N	I	Ref.
3	–	• 63.0 *4.66*	• 71.4 *0.14*	•	168
	• 60.0 *4.45*	–	• 71.4	•	

n(1)	ΔH (melting)	Ref.
2	4.9	15 bis
5	4.8	15 bis
7	4.7	15 bis

(1) For these compounds only melting heats are known, from ref. 15 bis.

4 n alkoxy benzyliden 4' cyano anilin

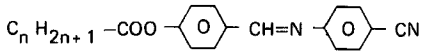


n	K	S_A	N	I	Ref.
1	• 106 *4.9* *5.6*	–	• 121	•	30 15 bis
2	• 105.5 *5.3*	–	• 128.5	•	2, 15 bis
	(1) • 95.5	–	• 128.5 *0.20*	•	185
	(2) • 105.9 *6.4*	–	• 128.5	•	
3	• (1) *7.1*				15 bis

n	K		S_A		N		I	Ref.
4	•	64 *5.5* *6.2*	–		•	112	•	30 15 bis
	•	65 *8.02*	–		•	108 *0.15*	•	31
	•	64.5 *6.15*	–		•	106.2 *0.14*	•	168
5	•	63 *5.9* *6.8*	–		•	96	•	30
	•	62.7 *5.84*	–		•	88.2 *0.11*	•	168
6	•	55 *6.1* *6.0*	–		•	102	•	30 15 bis
	•	61.5 *5.32*	–		•	102	•	31
	•	56.5 *6.17*	–		•	102.2 *0.15*	•	168
	•	61.05 *5.69*	–		•	102.1 *0.42*	•	206
	K_1	33.98 *1.22*	K		•		•	
7	•	66.5 *11.7*	–		•	95	•	2, 15 bis
	•	67.4 *8.20*	–		•	96.5 *0.17*	•	168
	$[K_1]$	58 *5.48*	N		•		•	
8	•	79 *8.8* *8.2*	–		•	97	•	30 15 bis
	•	79.9 *9,00*	–		•	93.4 *0.20*	•	168
10	•	65 *9.0*	•	100 *0.16*	•	101.5	•	30

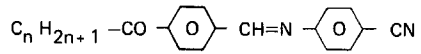
(1) Mesomorphic transitions unknown.

4 n alkyl carbonyloxy benzyliden 4' cyano anilin



n	K	N	I	Ref.
7	• 60 *8.18*	• 96.5 *0.18*	•	31

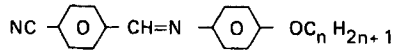
4 n alkyl carbonyl benzyliden 4' cyano anilin



n (1)	1	2	3	4	5	6	7	Ref.
ΔH (melting	7.6	10.6	7.3	13.2	8.0	7.6	6.7	15 bis

(1) Mesomorphic transitions unknown.

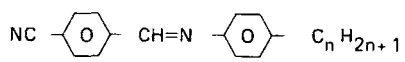
• 4 cyano benzyliden 4' alkoxy anilin



n	K		S_A		N		I	Ref.
1	•	117.1 *5.98* *5.6*	–		•	124.1 *0.15*	•	1, 32 15 bis
	on cooling :							
	•	76.3 *5.34*	–		•	119 *0.16*	•	32
2	•	115 *5.4*	–		•	132	•	2, 15 bis
3	•	(1) *6.2*						15 bis
4	•	86 *5.9* *9.4*	–		•	116	•	30 15 bis
5	•	(1) *9.0*						15 bis
6	•	79 *6.5* *7.1*	–		•	107	•	30 15 bis
8	•	73 *6.6*	•	83	•	108	•	30
	•	73.8 *6.24*	•	83.4	•	108.5 *0.1*	•	33
	•	73	•	84 *0.0*	•	109	•	3
			•	84 *0.012*	•	109 *0.17*	•	34

(1) Mesomorphic transitions unknown.

• 4 cyano benzyliden 4' alkyl anilin



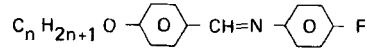
n	K_1		K_2		N		I	Ref.
4	–		•	79 *8.1* *8.9*	•	[64]	•	30 15 bis
7	–		•	61 *7.25* *16.9*	•	73.8 *0.16*	•	15 bis
	•	[51] *4.32*	–		•		•	35

n	K_1		K_2		S		N		I	Ref.
8	–		•	66 *9.11*	–		•	71.2	•	35
	•	[43] *6.85*	–		•	[63.8] *0.03*	•	*0.22*	•	
9	–		•	59 *8.81*	•	75.4 *0.14*	•	77.5 *0.35*	•	35
	•	[48] *5.52*	–		•		•		•	
10	–		•	72 *8.63*	•	78.5 *0.48*	–		•	35
	•	[56] *5.72*	–		•				•	
11	–		•	68 *9.73*	•	83.3 *0.83*	–		•	35
	•	[58] *10.3*	–		•				•	
15	–		•	81 *14.1*	•	88.1	–		•	35
	•	[69] *12.0*	–		•				•	

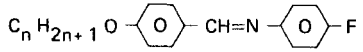
n (1)	2	3	5	6	Ref.
ΔH (melting)	5.7	5.1	8.1	4.7	15 bis

(1) Mesomorphic transitions unknown.

• **4 n alkoxy benzyliden 4' fluoro anilin**

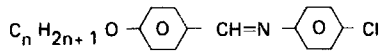


n	K		S_B		S_A		N		I	Ref.
4	•	66.7 *6.5*	–		•	[59.4]	•	[60.9]	•	30
6	•	55.5 *5.3*	•	57.3	•	63	•	63.5	•	30
8	•	62 *7.8*	–		•	65.8	–		•	30



n	K		N		I	Ref.
5	•	41 *5.6*	•	[11]	•	30
7	•	25 *6.9*	•	[8.5]	•	30

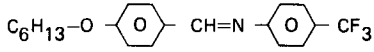
• 4 alkoxy benzyliden 4' chloro anilin



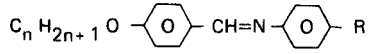
n	K		S		S_B		S_A		I	Ref. (1)
4	•	84.5 *5.2*	–		•	90	•	90.5	•	30
5	•	59 *4.9*	–		•	80	•	93.5	•	30
6	•	53.3 *4.8*	–		•	89.4	•	97	•	30
	•	54.5 *2.60*	•	60.7 *2.96*	•	89.4	•	97	•	36
	•	57	–		•	89.5	•	96.5	•	197
8	•	67.5	–		•	87	•	98.5	•	197
10	•	62	–		•	83.5	•	97.5	•	197
	K_2	58.5	K_3							
12	•	70	–		•	78.5	•	94	•	197
	K_2	67.5	K_3							
14	•	78.5	–		•	[78.5]	•	90	•	197
	K_2	73	K_3							
16	•	83.5	–		–		•	85.5	•	197
	K_2	77	K_3							
18	•	87	–		–		•	[83.5]	•	197
	K_2	80	K_3							

(1) Results of ref. 197 are obtained from graphical values.

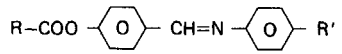
Ref. 30 bis



$\Delta H_{KS} = 5.065$ K 72.0 S 84.4 I $\Delta H_{SI} = 2.3$

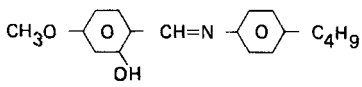


n	R	K	S_A	N	I	Ref.
1	$-OCOCH_3$	• 85.2 *5.71*	–	• 109 *0.22*	•	32
		• 84.9	–	• 109.5	•	168
		$[K_1]$ 82.0 → N				
1	$-OCOC_3H_7$	• 50.5 *5.57*	–	• 111.8 *0.14*	•	167, 168
		$[K_1]$ 50.3 → N *4.09*				
		• 46.7 *3.620*		• ?	•	187
4	$-OCOC_3H_7$	• 71 *2.810*		• ?	•	187
4	$-CH=CH_2$	• 88.3 *1.82*	–	• 120.6 *0.174*	•	37
4	$-COCH_3$	• 84 *3.66*	• 99 *0.820*	• 111 *0.110*	•	3

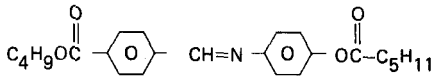


R	R'	K_1	K_2	S	N	I	Ref.
$(CH_3)_2$–CH–	–COOH	• 182 *1.36*	• 244 *4.68*	• 251	• (1)	•	38
CH_2=C– CH_3	–COOH	• 182 *1.84*	• 201 *2.14*	• 206	• (1)	•	38
CH_3–CH_2	–CN	–	• 109.5 *5.90*	–	• 124 *0.162*	•	38
C_6H_{13}	–CN	–	• 55.4 *7.20*	–	• 9.55 *0.15*	•	168
CH_2=CH–	–CN	–	• 136 *5.11*	–	• 164.5	•	38
CH_3–CH_2–	–C_4H_9–n	–	• 65 *3.99*	–	• 71.2 *0.176*	•	40
CH_2=CH–	–C_4H_9–n	–	• 48.5 *6.69*	–	• 56.5 *0.069*	•	41
$(CH_3)_2$=CH–	–C_4H_9–n	–	• 59 *5.42*	–	–	•	38
CH_2=C– CH_3	–C_4H_9–n	–	• 58 *4.98*	–	–	•	41
n–$C_6H_{13}O$–	–OCH_3	• 68 *4.04*	• 71 *5.56*	–	• 82 *0.16*	•	5

(1) The temperature of N–I transition is not known because of the decomposition of the compound.

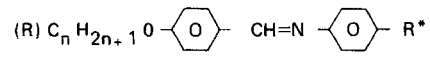


K 41.36 *5.36* N 60.49 *0.21* I ref. 42



K 48.5 *6.17* N 96.0 *0.18* I

[K_1] 47.3 *5.31* N



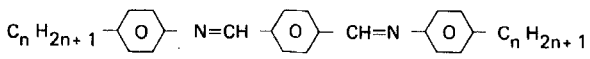
n	R*	K	S_4	S_3	S_2	S_1	N*	I	Ref.
1	$-CH_2-CH(CH_3)-CH_2-CH_3$	• 21.5 *4.44*	–	–	–	–	• 24	•	43
2	–	• 27.8 *3.55*	–	–	–	–	• 60 *0.11*	•	43
3	–	• 29.7 *4.27*	–	–	–	–	• 40.5 *0.16*	•	43
4(1)	–	• 30 *4.16*	–	–	• [18]	• 35 *0.18*	• 56 *0.17*	•	43
5(2)	–	• 33.4 *3.75*	–	–	–	• [30.1]	• 50.1 *0.26*	•	43
6(3)	–	• 30.4 *3.44*	–	• 37.9 *1.33*	• [37.5]	• 46.2 *0.5*	• 58.1 *0.32*	•	43
7(3)	–	• 43.6 *6.57*	–	• [39]	• [42.9]	• 46.9	• 56.1 *0.36*	•	43
8(3)	–	• 44.1 *5.59*	–	• [36]	• [44.8]	• 55.5 *0.48*	• 60.3 *0.41*	•	43
9(4)	–	• 59.3 *7.58*	–	–	• [46.2]	• [57]	• [58.3]	•	43
10(3)	–	• 53.8 *6.16*	–	• [31]	• [47.4]	• 61.7 *1.03*	–	•	43
1	$-(CH_2)_2-C(C_2H_5)(CH_3)$	• 27.6 *4.7*	–	–	–	–	• [19.9]	•	43
2	–	• 46 *5.03*	–	–	–	–	• 58.7 *0.09*	•	43
3	–	• 42 *4.27*	–	–	–	–	• [39.1]	•	43
4(5)	–	• 46.1 *3.1*	• [30.1]	• [39.9]	• [45]	• 58.5 *0.66*	• 61.5 *0.4*	•	43
5(5)	–	• 18.3 *2.9*	• 41.1 *0.08*	• 47.1 *0.46*	• 60.9 *0.25*	• 64.3 *1.11*	–	•	43
6(5)	–	• 18	• 44.1 *0.1*	• 48.8 *0.6*	• 57.5 *0.19*	• 66.1 *1.23*	–	•	43
7(5)	–	• 19.4 *3.19*	• 42.5 *0.13*	• 45.5 *0.59*	• 62.5 *0.32*	• 65.8 *1.31*	–	•	43
8(5)	–	• 32.4 *.37*	• 47.7 *0.15*	• 53.3 *0.61*	• 66.4 *0.27*	• 71.1 *1.35*	–	•	43
9(5)	–	• 48.8 *6.44*	• [44.1]	• 51.4	• 67.6 *0.35*	• 70.4 *1.59*	–	•	43
10(5)	–	• 51.2 *5.98*	• [45.4]	• 52.9	• 68.1 *0.12*	• 72.1 *1.5*	–	•	43

n	R*	K		S_4	S_3	S_2	S_1	N*	I	Ref.
1	$-(CH_2)_3-CH-C_2H_5$ CH_3	•	11.9 *2.88*	–	–	–	–	• [5.8]	•	43
2(6)	–	•		–	–	• [−9.5]	• [8.5]	• 51 *0.15*	•	43
3(7)	–	•	14	–	–	–	• [9.0]	• 30.5 *0.21*	•	43
4(8)	–	•		–	–	• 39.4 *0.6*	• 52.9 *0.75*	• 57 *0.37*	•	43
5(6)	–	•		–	–	• 35.5 *0.68*	• 50.9 *0.58*	• 53.1 *0.63*	•	43
6(6)	–	•		–	–	• 43.3 *0.58*	• 61.9 *1.21*	–	•	43
7(9)	–	•	1.5	–	• 44.1 *0.53*	• 53.9 *0.17*	• 60.4 *1.18*	–	•	43
8(9)	–	•	31.1 *4.72*	–	• 49.7 *0.82*	• 59.6 *0.19*	• 66.1 *1.37*	–	•	43
9(9)	–	•	44.1 *6.13*	–	• 53.7 *0.66*	• 65.9 *0.18*	• 68.9 *1.45*	–	•	43
10(9)	–	•	44.4 *5.28*	–	• 53.8 *1.03*	• 65.1 *0.31*	• 68.3 *1.63*	–	•	43

* All the smectic phases are identified by their textures :

(1) $S_1 = S_C, S_2 = S_B$
(2) $S_1 = S_B$
(3) $S_1 = S_A, S_2 = S_C, S_3 = S_B$
(4) $S_1 = S_A, S_2 = S_B$
(5) $S_1 = S_A, S_2 = S_C, S_3$ and S_4 unidentified smectic phases
(6) $S_1 = S_A, S_2 = S_C$
(7) S_1 mosaic like texture
(8) $S_1 = S_A, S_2 = S_B$
(9) $S_1 = S_A, S_2 = S_C, S_3 = S_B$

• **Terephtal bis (aniline)**

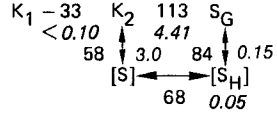


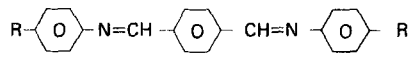
n	K	S_3	S_2	S_1	N	I	Ref.
1	• 186.7 *8.69*	–	–	–	• 252.6 *0.27*	•	1, 32
	on cooling :						
	• 143.3 *8.75*				• 246 *0.24*	•	1
	• 188 *6.28*	–	–	–	• 283 *0.13*	•	5
	• 192 *7.90*	–	–	–	• 268 *1.10*	•	208
2	• 126 *4.07*	–	–	• 148 *2.61*	• 251 *0.085*	•	38
	• 142 136.5 *7.2*	–	–	–	• 239 236.9 *0.15*	•	169

n	K	S_6	S_H	S_G	S_F	S_I	S_C	S_A	N	i	Ref.
3	• 109.2 109.2 *3.4*	–	• 114.5 115.8 *0.14*	• 143.0 142.1 *1.8*	–	–	• 150.7 149.7 (a)	• 180.6 180.1 *0.09*	• 255.2 255.2 *0.26*	•	169 (1)
4	• 113 112.8 *4.7*	• [74.0] [79.8] *0.10*	• [89.2] [89.1] *0.31*	• 144.5 144 *1.05*	–	–	• 172 171.7 (a)	• 199 197.7 *0.14*	• 235 234 *0.32*	•	169 (1)
	• 113 *4.37*	• [68] *0.05*	• [84] *0.15*	• 144.1 *0.87*	–	–	• 172.5 < 0.02	• 199.5 *0.05*	• 236.5 *0.22*	•	28bis (2) 4
		• [68]	• [80]	• 146 *0.96*	–	–	• 174	• 201	• 238	•	174
	• 109 • 113 *4.41*			• 144.5 *0.85*	–	–	• 172	• 199 *0.06*	• 233 *0.22*	•	183
5	• 72.8 73.1 *3.6*	–	• [62.8] 63.7 *0.27*	• 139 139.8 *0.023*	• 148.8 148.7 *0.88*	–	• 178.3 178.5 (a)	• 212 210.5 *0.29*	• 233.3 231.5 *0.37*	•	169 (1)
	• 68 *3.5*	–	• [61] *0.22*	• 140 *0.015*	• 149 *0.86*	–	• 179 *0.01*	• 212 *0.18*	• 233 *0.26*	•	175
6	• 71.3 71.6 *4.2*	–	• [64.5] [64.6] *0.22*	• 141.6 142.6 *0.015*	• 152.4 152.7 *1.1*	–	• 186.2 186.8 *0.016*	• 207.5 206.6 *0.37*	• 215.5 213.6 *0.35*	•	169 (1)
	• 66 *3.8*	–	• [60] *0.10*	• 143 *0.005*	• 153 *1.0*	–	• 187 *0.010*	• 208 *0.34*	• 215 *0.38*	•	175
7	• 61.8 61.7 *3.1*	–	• [48] [47.7] *0.24*	• 143 144.3 *0.007*	• 156.9 157.1 *1.14*	–	• 191.4 191.4 *0.05*	• 210 208.5 *0.65*	• 211.5 210.7	•	159 (1)
	• 57 *3.7*	–	–	• 144 *0.005*	• 157 *1.1*	–	• 192 *0.025*	• 209 *0.40*	• 212 *0.43*	•	175
8	• 63.5 64 *7.8*	–	• [46]	• 138.5 140 *0.002*	• 156.8 156.9 *1.30*	–	• 192.5 191.7 *0.06*	• 202.5 201.4 *1.4*	–	•	169 (1)
9	• 57.3 57 *7.7*	–	–	• 132.5 143 *≈ 0.001*	• 155.5 154.6 *0.005*	• 157.5 156.5 *1.5*	• 192.7 190.8 *0.13*	• 199 196.8 *1.3*	–	•	169 (1)
10	• 72.3 72.2 *12.1*	–	–	• 115 115 *⩽ 0.001*	• 148.7 148.7 *0.004*	• 154.8 154.4 *1.6*	• 189.2 188.4 *0.42*	• 191 190.2 *1.7*	–	•	169 (1)

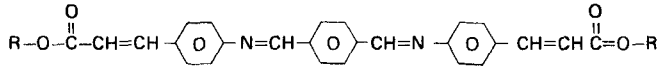
(1) Ref. 169 : for each compound :
first line : transition temperatures according to the microscopic obervation
second line : transition temperatures from the DSC investigations
(a) S_C–S_A transition with only a pump in the C_p curve i no latent heat.

(2) From ref. 28 bis



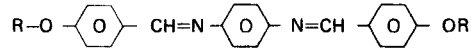


R	K	S_2	S_1	N	I	Ref.
CH_3O	• 224 *6.45*	–	–	• 330 *0.15*	•	5
n C_4H_9O–C(=O)–	• 91 *9.17*	• 134	• 185 *0.21*	• 203 *0.17*	•	46



R	K_1	K_2	S_C	S_A	N	I	Ref.
CH_3–CH_2–C(H)(CH_3)–CH_2–	• 130	• 149 *7.6*	• 180	• 242 *0.28*	• 288 *0.14*	•	183

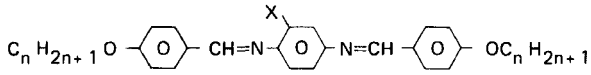
• N–N′–bis (benzylidene) phenylenediamine



R	K_3	K_2	K_1	S_5	S_4	S_3	S_2	S_1	N	I	Ref.
CH_3	–	–	• 214 *10.00*	–	–	–	–	–	• 318 *0.50*	•	208
	–	–	• 225.1 *10.9*	–	–	–	–	–	• ∿ 341	•	168
$n–C_5H_{11}–$	• 148.3 *1.15*	• 173.5 *6.22*	–	–	–	–	–	–	• 266 *0.26*	•	166
$n–C_6H_{13}–$	• 123.7 *2.10*	• 138 *0.84*	• 155.2	– *4.55*	• 160.2	• 167.2	• 168 *1.10*	• 186 *0.55*	• 254.5 *0.31*	•	166(1)
$n–C_7H_{15}–$	• 112 *3.04*	• 125.4 *1.24*	–	• 148.7 *1.63*	• 155.9 *0.36*	• 161.7	• 168.2 *0.77*	• 198 *0.65*	• 240.4 *0.26*	•	166(2)
$n–C_8H_{17}–$	• 112 *2.44*	–	• 116 *1.60*	• 143.2 *1.27*	• 150.5 *0.34*	• 155.6 *0.09*	• 165 *0.55*	• 204.4 *0.67*	• 233.2 *0.34*	•	166(1)
$n–C_8H_{17}–$	–	–	• 115 *4.2*	• 142 *1.6*	• 149 *0.50*	• 155 *0.10*	• 164 *0.76*	• 203 *0.85*	• 231 *0.54*	•	22
$CH_3–CH_2–CO–$	–	–	• 181 *3.66*	–	–	–	–	• 187 *3.78*	• > 315	•	45
$CH_2=CH–CO–$	–	–	• 180 *8.95*	–	–	–	–	• polym.		•	41

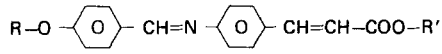
(1) $S_4 = S_K$, $S_3 = S_J$, $S_2 = S_I$ and $S_1 = S_C$: ref. 239.

(2) $S_5 = S'_H$, $S_4 = S'_G$, ref. 236, $S_2 = S_B$, $S_1 = S_C$



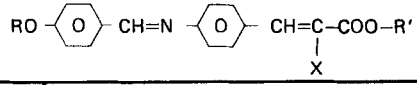
n	X	K	S_C	N	I	Ref.
8	Cl	• 58.7 *11.8*	–	• 180.4 *0.40*	•	168
		[K_1] ou [S] —57.4 (*9.00*)→ N				
10	Cl	• 66 *11.68*	• 112.5 *0.22*	• 166.6 *0.57*	•	46
10	Cl	• 66 *14.6*	• 114 *0.19*	• 168.4 *0.38*	•	168
		[K_1] —64 (*11.0*)→ S				
12	CH_3	• 80 *18.76*	• 113.5 *0.23*	• 159 *0.61*	•	46

• **Benzilidene aminocinnamate**

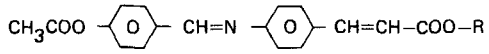


R	R′	K	S_B	S_A	N	I	Ref.
CH_3	C_2H_5	• 107	• [95] *0.21*	• 118 *0.82*	• 140 *0.07*	•	47
CH_3	n–C_3H_7	• 79 *6.0*	• [71.5] *0.19*	• 100 *0.41*	• 133 *0.10*	•	47
		• 79 *5.9*	• [71] *0.19*	• 101 *0.41*	• 134 *0.10*	•	10, 48
CH_3	n–C_4H_9	• 68 *6.5*	• 73.5 *0.34*	• 93 *0.55*	• 111 *0.08*	•	47
		• 66 *6.4*	• 70 *0.34*	• 91 *0.54*	• 109 *0.08*	•	10, 48
CH_3	$(CH_2)_2$–CH(CH_3)(CH_3)						
		• 47 *4.10*	• 76 *0.25*	• 97 *0.80*	–	•	10, 48
CH_3	n–C_6H_{13}	• 60 *7.3*	• 77	• 87 *0.26*	• 103 *0.11*	•	47
		• 58.5 *7.40*	–	• 83.5 *0.26*	• 101 *0.11*	•	10, 48
C_2H_5	C_2H_5	• 82 *6.45*	• 117–119 *0.41*	• 157 *1.1*	• 160 *0.17*	•	10
		• 81.4 *6.52*	• 119.3 *0.50*	• 157.3 *1.22*	• 160.2 *0.12*	•	49
		• 82 *6.45*	• 113 *0.41*	• 157 *1.10*	• 160 *0.17*	•	10,48

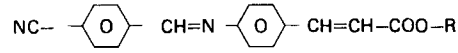
R	R′	K	S_B	S_C	S_A	N	I	Ref.
$n\text{-}C_{12}H_{25}$	$n\text{-}C_5H_{11}$	• 73.9 *6.7*	• 95 *1.31*	• 106.7 *0.15*	• 134.3 *2.0*	–	•	50
		• 77.6 *6.69*	• 94.6 *1.31*	• 106.7 *0.146*	• 137.2 *2.01*	–	•	49
		• 74.6 *6.7*	• 96.3 *1.31*	• 107.3 *0.146*	• 133.1 *2.02*	–	•	1, 51
$n\text{-}C_4H_9$		• 107 *6.04*	• 122 *0.63*	–	• 183 *0.25*	• 222 *0.09*	•	52
$CH_3(CH_2)_2\text{-}CH(CH_3)\text{-}$		• 113 *9.68*	–	–	• [68] *0.03*	• [98] *0.04*	•	52
$CH_3\text{-}CH_2\text{-}CH(CH_3)\text{-}CH_2\text{-}$		• 112 *8.28*	• [75] *0.63*	–	• 147.5 *0.23*	• 165.5 *0.09*	•	52
$(CH_3)_2\text{-}CH\text{-}(CH_2)_2\text{-}$		• 112.5 *6.35*	–	–	• 168 *0.14*	• 200 *0.08*	•	52



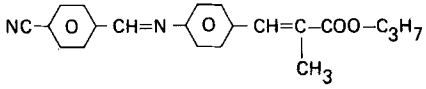
R	R'	X	K		S_A		N		I	Ref.
CH_3	n–C_3H_7	CH_3	•	67.5 *7.4*	–		•	83.5 *0.06*	•	10, 48
C_2H_5	C_2H_5	CH_3	•	94.4 *6.9*	•	[77]	•	123.5 *0.048*	•	49
C_2H_5	n–C_3H_7	CH_3	•	91.7 *9.23*	•	[79]	•	121.5	•	53
			•	92	•	[80]	•	121 *0.07*	•	54
C_2H_5	n–C_4H_9	CH_3	•	60.2 *2.608*	•	85.5 *0.101*	•	100.8 *0.102*	•	53
			•	60	•	85 *0.36*	•	101 *0.46*	•	54
C_2H_5	n–C_5H_{11}	CH_3	•	66 *8.5*	•	83.6 *0.088*	•	100 *0.080*	•	53
			•	66	•	83 *0.33*	•	100 *0.34*	•	54
C_2H_5	n–C_6H_{13}	CH_3	•	59.4 *8.752*	•	83.8 *0.216*	•	91.8 *0.139*	•	53
			•	60	•	83 *0.23*	•	92 *0.15*	•	54
C_2H_5	n–C_7H_{15}	CH_3	•	62.5 *8.49*	•	83.0 *0.143*	•	90.8 *0.193*	•	53
			•	62	•	82 *0.27*	•	90 *0.21*	•	54
C_2H_5	n–C_8H_{17}	CH_3	•	57.4 *10.745*	•	82.4 *0.282*	•	86.5 *0.141*	•	53
			•	58	•	82 *0.31*	•	86 *0.15*	•	54
C_2H_5	n–C_9H_{19}	CH_3	•	59.7 *10.232*	•	82.7 *0.253*	•	85.8 *0.216*	•	53
			•	60	•	82 *0.30*	•	86 *0.24*	•	54
C_2H_5	n–$C_{10}H_{21}$	CH_3	•	58.5 *11.5*	•	82.6	•	83.2 *0.519*	•	53
			•	59	•	82 *0.31*	•	83 *0.25*	•	54
C_2H_5	n–C_3H_7	C_2H_5	•	99 *10.8*	–		•	[63] *0.12*	•	10,48



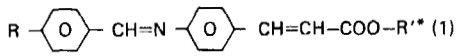
R	K	S_B	S_A	N	I	Ref.
–CH(CH$_3$)$_2$	• 75.5 *6.89*	• [74] *0.50*	• 105 *0.81*	–	•	52
–CH$_2$CH(CH$_3$)$_2$	• 103 *6.48*	• [38] *0.21*	• 111 *0.16*	• 143 *0.10*	•	52
–(CH$_2$)$_2$–CH(CH$_3$)$_2$	• 74 *6.21*	• [57.5] *0.33*	• 110 *0.75*	–	•	52
		K_1 57 K_2 57.5 K_3 74 *0.53*				
–(CH$_2$)$_3$–CH(CH$_3$)$_2$	• 86 *9.91*	• [53] *0.34*	• 106 *0.37*	• 112 *0.07*	•	52



R	K	N	I	Ref.
$-C_3H_7$	•	102.5 *5.8* •	163 *0.16* •	10, 48
$-C_4H_9$	(I) •	108 *8.68* •	133 *0.10* •	55
	(II) • [90]	•		
	•	87 *5.6* •	133 *0.09* •	10,48
$-(CH_2)_2CH(CH_3)_2$	•	100 *6.45* •	109 *0.09* •	10, 48
$-C_6H_{13}$-n	•	59 *5.6* •	119 *0.09* •	10,48
$-C_8H_{17}$-n	•	62 *5.5* •	111 *0.22* •	10,48



K 120 N 122 I Ref. 48, 10
7.50 *0.09*



R	R′	K	S_2	S_1	N	I	Ref.
–CN (E)	–$\dot{C}$HD–C_3H_7	K_1 • 108 *9.37*	–	–	• 133 *0.08*	•	55
		K_2 • 90 . . .					
(R)	–	K_1 • 108 *0.19*	–	–	• 133 *0.08*	•	55, 57
		K_2 • 90 . . . *6.42*					
$–OCH_3$ (E)	–CH_2–$\dot{C}$H–C_2H_5 (CH$_3$)	• 44 *3.7*	• 60 *0.28*	• 82 *0.46*	• 102 *0.06*	•	9
(R)	–	• 47 *4.4*	• 60 *0.32*	• 82 *0.40*	• 102 *0.02*	•	9
$–OC_2H_5$ (E)	–CH_2–$\dot{C}$H–C_2H_5 (CH$_3$)	K_1 / K_2 • 40 38.5 *3.6*	• 75 *0.36*	• 117 *1.03*	–	•	9
(R)	–	K_1 • 40 *4.85*	• 83 *0.28*	• 124 *0.99*	–	•	9
		K_2 • 36 *3.17*					
–CN	–CH_2–$\dot{C}$H–C_2H_5 (CH$_3$) (2)	• 99.6 *6.52*	–	–	• [99.5] *0.10*	•	1, 32
–CN (E)	–CH_2–$\dot{C}$H–C_2H_5 (CH$_3$) (3)	• 93.5 *5.65*	–	–	• 108.5 *0.06*	•	9
(R)	–	• 96.5 *5.6*	–	–	• 108 *0.06*	•	9
$–NO_2$ (E)	–CH_2–$\dot{C}$H–C_2H_5 (CH$_3$)	• 83 *6.70*	–	–	• 86	•	9
(R)	–	• 83 *7.1*	–	–	• 86	•	9

R	R'*	K		S_1		N		I	Ref.
$-OCH_3$ (E)	$-CH_2-\overset{*}{C}H-C_4H_9$ (CH$_3$)	•	55 *4.65*	•	69.5 *0.17*	•	90.5 *0.06*	•	9
(R)	–	•	60 *6.6*	•	70 *0.17*	•	92 *0.11*	•	9
$-OC_2H_5$ (E)	$-CH_2-\overset{*}{C}H-C_4H_9$ (CH$_3$)	•	86 *8.6*	•	106 *0.83*	–		•	9
(R)	–	•	87 *6.3*	•	99 *0.6*	–		•	9
$-CN$ (E)	$-CH_2-\overset{*}{C}H-C_4H_9$ (CH$_3$)	•	70 *6.97*	–		•	97 *0.08*	•	9
(R)	–	•	71	–		•	99 *0.08*	•	9
$-NO_2$ (E)	$-CH_2-\overset{*}{C}H-C_4H_9$ (4) (CH$_3$)	•	92.5 *7.4*	–		–		•	9

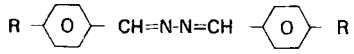
(1) (E) enantiomer ; the nematic mesophase is chiral : N*
(R) racemic ; classical nematic mesophase : N

(2) commercial product, no specification about enantiomer or racemic

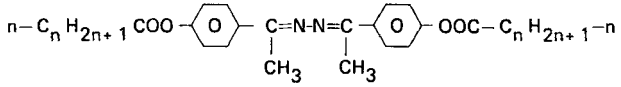
(3) N_d for configuration amylic alcohol S (–) – ref. 30 –

(4) metastable cholesteric mesophase ; N_g for 2–methyl hexyl alcohol configuration R (+)

• **Hydrazines derivatives**



R	K		N		I	Ref.
CH_3O-	•	160 *7.11*	•	180 *0.16*	•	60
CH_3-CH_2-COO-	•	166 *6.76*	•	196 *0.215*	•	38
$CH_2=CH-COO-$	•	138 *4.43*	•	? polymérisation		39



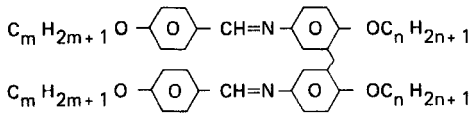
n	K_2		K_1		S_C (1)	N		I	Ref.
1	–		•	145 *7.4*	–	•	151.5 *0.28*	•	61
2	•	82.2 *2.21*	•	115.7 *7.3*	–	•	145.0 *0.21*	•	61
	•	105 *5.4*	–		–	•	145.0	•	61
3	•	78.2 *2.27*	•	117 *4.8*	–	•	156 *0.27*	•	61
4	•	84.5 *1.92*	•	100.7 *6.5*	–	•	136 *0.23*	•	61
	•	100.5 *4.6*	–		–	•	136	•	61
5	•	80.5 *3.1*	•	111.4 *8.8*	–	•	136 *0.32*	•	61
	•	101 *5.9*	–		–	•	136	•	61
6	•	84 *2.69*	•	101.5 *8.4*	–	•	121.7 *0.29*	•	61
	•	95.5 *6.0*	–		–	•	121.7	•	61

n	K_2		K_1		S_C		N		I	Ref.
7	•	85 *3.2*	•	111.5 *10.0*	–		•	121.5 *0.34*	•	61
	•	105 *7.0*	–		–		•	121.5	•	
8	•	91.2 *2.76*	•	104.7 *9.9*	–		•	113.6 *0.34*	•	61
	•	101.7 *6.9*	–		–		•	113.6	•	
9	•	94 *3.3*	•	111 *11.9*	–		•	113.5 *0.55*	•	61
	•	107 *8.5*	–		–		•	113.5	•	
10	•	92.8 *3.1*	•	107.9 *13.1*	•	[105.5] *0.78*	•	108 *0.66*	•	61
	•	104.8 *8.5*	–		•	[105.5]	•	108	•	
11	•	97 *3.9*	•	112 *14.8*	•	[110] *2.05*	–		•	61
	•	107.7 *9.2*	–		•	[110]	–		•	
12	•	96 *3.7*	•	108.3 *15.3*	•	[107] *2.33*	–		•	61
	•	105.1 *9.8*	–		•	107	–		•	

n	K_2		K_1		S_C		I	Ref.
13	•	101 *4.3*	•	113.8 *16.8*	•	[111] *2.25*	•	61
	•	110.5	–		•	111	•	
14	•	101 *3.5*	•	109.4 *17.8*	•	[106.8] *2.73*	•	61
	•	105.5 *11.5*	–		•	106.8	•	
15	•	103.8 *4.6*	•	111.8 *20.9*	–		•	61

(1) $S = S_C$ from texture identification

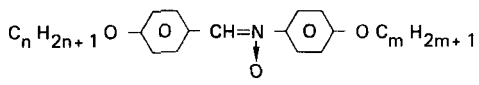
• **Bis 2–n alkoxy–5 (4'n.alkoxy benzylidene amino) methanes**



m	n	K		S		N		I	Ref.
8	6	•	137.7 *15.48*	–		•	[112]	•	186
	7	•	126.3 *14.09*	–		•	[114]	•	186
	8	•	121.0 *7.85*	•	125.1 *5.97*	–		•	186
	9	•	121.1 *7.31*	•	130.1 *6.43*	–		•	186
	10	•	117.6 *7.00*	•	133.3 *7.17*	–		•	186
10	6	•	130.3 *15.77*	–		•	[111.5]	•	186
	7 (1)	•	119.1 *14.11*	•	[103]	•	[112]	•	186
	8	•	110.2 *6.70*	•	123.8 *5.11*	–		•	186
	9	•	112.1 *7.65*	•	127.9 *6.12*	–		•	186
	10	•	113.5 *7.31*	•	131.5 *6.75*	–		•	186

(1) Solid-solid transition at 49,1°C with ΔH =2,63 kcal/mole

• **Nitrones**



n	m	K		S		N		I	Ref.
1	1	•	149 *7.92*	–		•	[120]	•	1, 58 59
1	2	•	146 *9.0*	–		•	[138] *0.172*	•	1, 58 59
1	3	•	155	–		•	[109]	•	1, 58 59
1	4	•	123 *8.11*	–		•	123 *0.150*	•	1, 58 59
1	5	•	112 *7.47*	–		•	120 *0.168*	•	1, 58 59
1	6	•	107 *6.66*	–		•	125 *0.197*	•	1, 58 59
1	7	•	120 *8.23*	–		•	125 *0.219*	•	1, 58 59
1	8	•	112 *11.8*	–		•	128 *0.268*	•	1, 58 59
1	10	•	108 *11.56*	•	109	•	129 *0.373*	•	1, 58 59
1	12	•	110 *13.02*	•	121 *0.045*	•	127 *0.475*	•	1, 58 59
1	14	•	112 *15.52*	•	124 *1.07*	–		•	1, 58 59
1	16	•	115 *15.89*	•	128 *1.07*	–		•	1, 58 59
1	18	•	119 *19.0*	•	127 *1.18*	–		•	1, 58 59
2	1	•	129 *8.04*	–		•	[128] *0.239*	•	1, 58 59
2	2	•	178 *10.44*	–		•	[158] *0.346*	•	 59