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Azoxy benzene derivatives

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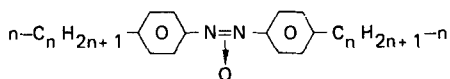
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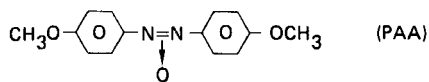
AZOXY BENZENE DERIVATIVES

• Azoxybenzenes

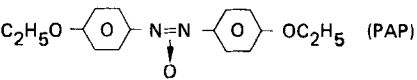


n	K ₂	K ₁	S	N	I	Ref.
3	—	• 65 4.7	—	• [60.5] 0.13	•	64
4	• 13 0.50	• 22 2.9	—	• 32 0.06	•	64
	—	• 19.6 3.20	—	• 32.5	•	167, 168
5	• 14 0.40	• 24 3.0	—	• 67.5 0.16	•	64
	—	• 19.6 3.76	—	• 32.5	•	167, 168
6 (1)	—	• 24 2.79	• [17] 0.005	• 54.5 0.13	•	64, 64 bis
	—	• 25.5 4.12	—	• 54.3	•	167, 168
7 (1)	—	• 34 3.0	• 54.5 0.05	• 71 0.26	•	64, 64 bis
8 (1)	—	• 39 4.64	• 64.5 0.35	• 67 0.55	•	64, 64 bis
9	—	• 45 5.74	• 76.5 1.61	—	•	64
10	• 35 4.71	• 50 6.65	• 76 1.88	—	•	64

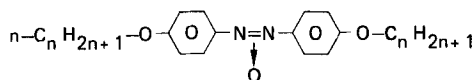
(1) The smectic phases of compounds with $n = 6, 7$ and 8 are isomorphic together and they are identified as smectic A from texture (64 bis).



K_2	K_1	N	I	Ref.
—	• 118 7.70	• 132 0.176	•	65
—	• 117 7.28	• 132 0.178	•	66
—	• 117.6 7.25	• 133.9 0.175	•	60
—	• 117.5 6.79	• 134.0 0.150	•	68
• 104.4 5.63	• 117.5 7.26	• 134.2 0.181	•	69
—	• 118.2 7.067	• 135.3 0.137	•	1, 67
—	• 117.5 6.8	• 134 0.15	•	70
—	• 115 7.06	• 135 0.137	•	3
—	• 119.5 7.23	• 136.5 0.167	•	71
• 104.5 5.32	• 119 7.18	• 133 0.152	•	72
	• 118.7 7.1	• 135.9 0.18	•	185

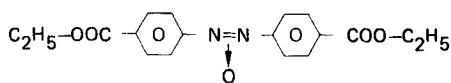


K		N		I	Ref.
•	136.6 6.422	•	167.5 0.327	•	1, 67
•	136.6 6.42	•	167.5 0.32 to 0.4	•	70
•	137.8 6.55	•	167.8 0.51	•	71
•	137 6.18	•	167.3 0.39	•	72
•	139.8 6.3	•	166 0.37	•	185

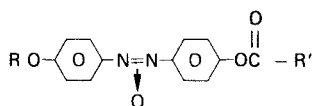


n	K	S _B	S _C	N	I	Ref.
3	• 115.5 6.429	—	—	• 123.6 0.161	•	1, 67
	• 115.5 6.43	—	—	• 123.6 0.13	•	70
	• 118.3 6.43	—	—	• 124.0 0.28	•	71
4	• 102.0 5.005	—	—	• 136.7 0.247	•	1, 67
	• 104 5.0	—	—	• 135 0.13	•	70
	• 105.8 5.0	—	—	• 136.6 0.41	•	71
5	• 75.5 3.487	—	—	• 123.2 0.173	•	1, 67
	• 81 3.49	—	—	• 119 0.12	•	70
	• 77 3.68	—	—	• 122 0.26	•	168
	K ₁ 67.5 5.45	K				
6	• 81.0 10.4	—	—	• 128.2 0.36	•	69
	• 81.3 9.892	—	—	• 120.1 0.250	•	73.1
	• 81.3 9.89	—	—	• 129.1 0.25	•	70
	• 79.6 9.67	—	—	• 127.7 0.49	•	71
	• 81 9.88	—	—	• 129 0.250	•	3
7	• 74.4 9.870	—	• 95.4 0.381	• 124.2 0.243	•	1, 67
	• 74 9.77	—	• 95 0.380	• 124 0.243	•	3
	• 70 9.5	—	• 91.5 0.38	• 123.3 0.41	•	183

n	K	S _B	S _C	N	I	Ref.
8	• 79.5 10.080	—	• 107.7 0.282	• 126.1 0.344	•	1, 67
	• 80 10.070	—	• 108 0.282	• 126 0.343	•	3
	• 79	—	• 107 0.282	• 125	•	28
9	• 75.5 9.123	—	• 113.0 0.395	• 121.5 0.422	•	1, 67
	• 76 9.11	—	• 113 0.394	• 122 0.421	•	3
10	• 78.2 9.221	—	• 120.6 0.554	• 123.4 0.752	•	1, 67
	• 78 9.21	—	• 121 0.553	• 123 0.751	•	3
11	• 80.8 9.821	—	• 121.4 2.407	—	•	1, 67
12	• 81.7 10.05	—	• 122.0 2.861	—	•	1, 67
16	K _I 89.5	• 91.1 1.49	• 115.5 4.38	—	•	74
	$K_{II} \quad 82 - 84.5 \quad K_I \quad 89.5 \quad S_B$ $\underbrace{\hspace{1.5cm}}_{15.38}$					
18	• 94.1 18.9	• 99.0 2.53	• 115.3 5.41	—	•	51
	• 94.1 18.90	• 99.0 2.526	• 115.3 5.410	—	•	1, 67
	• 94.8 18.9	• 100.1 2.52	• 116.2 5.40	—	•	11, 49
	• 94.2 18.95	• 99 2.53	• 115.3 5.28	—	•	74
$\left. \begin{array}{l} K_{IV} \end{array} \right\} 46-48 \quad \begin{array}{c} K_I \quad 94.2 \\ K_{II} \quad 91.2 \\ K_{III} \quad 86 \end{array} \quad S_B$						



K 114 S_A 115 I Ref. 75
4.7 1.2

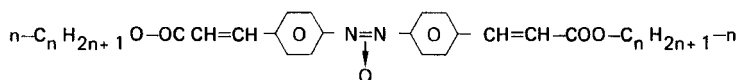


R	R'	K (1)		N		I	Ref.
CH ₃ -	-(CH ₂) ₂ - Cl	•	81 6.1	•	126 0.1	•	223
C ₂ H ₅ -	-(CH ₂) ₂ - Cl	•	88 8.1	•	143 0.14	•	223
C ₄ H ₉ -	-(CH ₂) ₂ - Cl	•	72	•	131 0.14	•	223
CH ₃ -	-(CH ₂) ₂ - Br	•	82	•	117 0.07	•	223
C ₂ H ₅ -	-(CH ₂) ₂ -Br(2)	•	91 5.5	•	136 0.13	•	223
C ₄ H ₉ -	-(CH ₂) ₂ -Br(2)	•	78	•	126	•	223
CH ₃ -	-CH=CH ₂	•	87 6.1	•	147 0.1	•	223
C ₂ H ₅ -	-CH=CH ₂	•	110-114 7	•	160 0.19	•	223
C ₄ H ₉ -	-CH=CH ₂	•	69	•	145 0.18	•	223

(1) Some of these compounds exhibit a very complex crystalline polymorphism. See the ref. 223 for more informations.

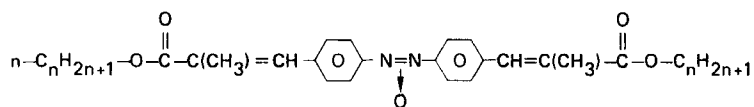
(2) Stable melting point at 112°C. No enthalpy given.

• Di-Azoxycinnamates



n	K ₂	K ₁	S _C	S _A	I	Ref.
2	—	• 135.7 5.21	• 267 2.77	—	•	76
3	—	• 120.7 3.96	—	• 252 1.66	•	76
4	—	• 111.2 3.93	• 222 1.64	—	•	76
5	—	• 99.4 3.70	• 142.9 0.01	• 203 1.47	•	76
6	—	• 95.1 6.66	• 156.1 0.05	• 188.7 1.53	•	76
7	• 80 3.31	• 92 3.39	• 160 0.09	• 182.5 1.46	•	76
8	—	• 92.4 7.40	• 162.3 0.14	• 175.3 1.47	•	76
9	—	• 94.3 7.67	• 161.3 0.16	• 170.7 1.44	•	76
10	—	• 97.6 8.47	• 159.0 0.19	• 165.2 1.41	•	76
11	• 81–88	• 97.3 8.512	• 156.1 0.218	• 160.2 1.327	•	76,49
12	—	• 101.6 9.59	• 152.8 0.21	• 156.2 1.33	•	76
16	• 81–88 0.58	• 107.1 13.91	• 133.0 0.29	• 135.0 1.14	•	76
	• 88 0.578	• 107.1 13.911	• 133 0.289	• 135 1.138	•	49

• Di-*n* azoxymethyl cinnamates



n	K ₂	K ₁	S _C	S _A	N	I	Ref.
1	—	• 145.4 10.9	—	• 135	• 176.5 0.09	•	76
2	—	• 110 7.9	—	• 125 0.26	• 141 0.29	•	54, 1
	• 75 1.9	• 108.9 7.37	—	• 135.1 0.41	• 140.7 0.09	•	76
3	—	• 72 6.69	—	• 119 0.26	• 131 0.29	•	1, 54
	—	• 74.2 7.72	—	• 129 0.43	• 131.3 0.10	•	76
4	—	• 61 9.08	—	• 100 0.69	—	•	1, 54
	—	• 62 8.64	—	• 102.3 0.77	—	•	76
5	—	• 61 9.56	—	• 100 0.81	—	•	1, 54
	• 55 2.37	• 60.8 7.10	—	• 100.1 0.91	—	•	76

n	K ₂	K ₁	S _C	S _A	I	Ref.
6	—	• 55 5.98	—	• 91 0.96	•	1, 54
	• 47.5 0.25	• 54.0 5.8	—	• 90.7 1.03	•	76
7	—	• 52 6.21	—	• 90 1.14	•	1, 54
	—	• 53.1 6.29	—	• 90.6 1.28	•	76
8	—	• 63 13.9	• [55]	• 89 1.39	•	1, 54
	—	• 63.0 14.41	—	• 88.4 1.48	•	76
9	—	• 67 6.45	• 78	• 88 1.57	•	1, 54
	• 57 0.58	• 68.4 9.39	—	• 88.8 1.75	•	76
10	—	• 66 8.93	• 73 0.24	• 88 1.72	•	1, 54
	• 54 0.65	• 65.0 10.88	• 74.2 < 0.01	• 88.0 1.83	•	76
11	—	• 68 9.80	• 77	• 87 2.15	•	1, 54
	—	• 73.0 11.539	• 78.3 < 0.01	• 85.7 2.046	•	76, 49
12	—	• 79 15.7	• 83 ~ 0.24	• 87 2.01	•	1, 54
	—	• 79.0 17.32	• 83.7 0.03	• 87.9 2.23	•	76
16	• 70 5.706	• 75.6 14.525	• 84.4 3.242	—	•	49, 76