

TABLE 2

	(A) Acid generator (mass part)	(B) Resin (mass part)	(E) Basic compound (mass part)	Solvent (mass ratio)	Surfactant (100 ppm)
Ex. 1	A1-1 (18.0)	B-1 (80.2)	E-2 (1.80)	SL-1/SL-4 (80/20)	W-3
Ex. 2	A1-2 (15.0)	B-2 (83.6)	E-2 (1.40)	SL-1/SL-4 (80/20)	W-3
Ex. 3	A1-3 (12.0)	B-3 (86.8)	E-3 (1.20)	SL-1/SL-5 (20/80)	W-4
Ex. 4	A1-4 (10.3)	B-4 (88.7)	E-4 (1.00)	SL-1/SL-4 (70/30)	W-1
Ex. 5	A1-5 (7.5)	B-5 (91.8)	E-5 (0.75)	SL-1/SL-2 (60/40)	W-4
Ex. 6	A1-6 (15.5)	B-5 (83.4)	E-1 (1.15)	SL-4/SL-6 (80/20)	W-3
Ex. 7	A1-7 (11.5)	B-4 (87.5)	E-3 (0.98)	SL-1	W-2
Ex. 8	A1-8 (12.3)	B-3 (87.2)	E-2 (0.50)	SL-1/SL-3 (70/30)	W-2
Ex. 9	A1-9 (21.3)	B-2 (77.3)	E-4 (1.45)	SL-1/SL-5 (70/30)	W-2
Ex. 10	A1-10 (14.3)	B-1 (84.6)	E-2 (1.12)	SL-1/SL-4 (90/10)	W-3
Ex. 11	A1-11 (11.5)	B-1 (87.4)	E-4 (1.12)	SL-1/SL-2 (70/30)	W-4
Ex. 12	A1-12 (9.3)	B-3 (89.9)	E-3 (0.80)	SL-1/SL-4 (60/40)	W-1
Ex. 13	A1-13 (6.5)	B-2 (92.0)	E-3 (1.55)	SL-1/SL-2 (60/40)	W-3
Ex. 14	A1-1 (7.8)	B-3 (91.7)	E-3 (0.46)	SL-1/SL-5 (80/20)	W-2
Ex. 15	A1-4 (10.3)	B-6 (88.7)	E-4 (1.00)	SL-1/SL-4 (70/30)	W-1
Ex. 16	A1-5 (7.5)	B-7 (91.8)	E-5 (0.75)	SL-1/SL-2 (60/40)	W-4
Ex. 17	A1-6 (15.5)	B-8 (83.4)	E-1 (1.15)	SL-4/SL-6 (80/20)	W-3
Ex. 18	A1-5 (7.5)	B-9 (91.8)	E-5 (0.75)	SL-1/SL-2 (60/40)	W-4
Ex. 19	A1-13 (6.5)	B-10 (92.0)	E-3 (1.55)	SL-1/SL-2 (60/40)	W-3
Ex. 20	A1-13 (6.5)	B-11 (92.0)	E-3 (1.55)	SL-1/SL-2 (60/40)	W-3
Ex. 21	A1-13 (6.5)	B-12 (92.0)	E-3 (1.55)	SL-1/SL-2 (60/40)	W-3
Ex. 22	A1-13 (6.5)	B-13 (92.0)	E-3 (1.55)	SL-1/SL-2 (60/40)	W-3
Comp. 1	A-11 (4.5)	b-1 (95.2)	E-1 (0.32)	SL-1	W-4
Comp. 2	Z (25.0)	B-5 (73.2)	E-1 (1.80)	SL-4	W-1
Comp. 3	Z (11.3)	b-1 (87.7)	E-1 (1.00)	SL-4	W-1

TABLE 3

	Development residue density (number/cm <sup>2</sup> )	Ratio of film thickness change by EB exposure (%)	Ratio of film thickness change by EUV exposure (%)
Ex. 1	0.75	8.5	7.7
Ex. 2	0.93	8.3	7.5
Ex. 3	0.15	4.5	8.5
Ex. 4	0.45	5.5	8.2
Ex. 5	0.92	9.2	4.7
Ex. 6	0.85	4.6	4.1

TABLE 3-continued

	Development residue density (number/cm <sup>2</sup> )	Ratio of film thickness change by EB exposure (%)	Ratio of film thickness change by EUV exposure (%)
Ex. 7	0.56	6.2	9.0
Ex. 8	0.52	6.3	9.2
Ex. 9	0.75	8.3	7.5
Ex. 10	0.82	7.4	6.7
Ex. 11	1.81	9.4	6.5
Ex. 12	1.21	9.1	6.4
Ex. 13	1.81	9.2	6.2
Ex. 14	0.24	3.5	3.2
Ex. 15	0.54	7.5	5.5
Ex. 16	0.62	3.2	8.5
Ex. 17	0.72	7.4	6.2
Ex. 18	0.82	2.5	7.2
Ex. 19	2.45	9.0	6.0
Ex. 20	3.12	9.5	7.2
Ex. 21	2.95	6.0	6.0
Ex. 22	3.56	6.7	6.7
Comp. 1	6.25	33.5	30.2
Comp. 2	54.5	14.5	13.1
Comp. 3	102.5	34.3	30.9

[0358] Besides the above, the following components were used.

[0359] [Basic compound]

[0360] E-1: 2,4,5-triphenylimidazole,

[0361] E-2: tetrabutylammonium hydroxide,

[0362] E-3: 1,5-diazabicyclo[4.3.0]non-5-ene,

[0363] E-4: tri-n-octylamine, and

[0364] E-5: 2-phenylbenzimidazole.

[0365] [Surfactant]

[0366] W-1: Megafac F176 (produced by Dainippon Ink & Chemicals, Inc.) (fluorinated),

[0367] W-2: Megafac R08 (produced by Dainippon Ink & Chemicals, Inc.) (fluorinated and siliconized),

[0368] W-3: polysiloxane polymer KP-341 (produced by Shin-Etsu Chemical Co., Ltd.) (siliconized), and

[0369] W-4: Troy Sol S-366 (produced by Troy Chemical Co., Ltd.).

[0370] [Solvent]

[0371] SL-1: propylene glycol monomethyl ether acetate,

[0372] SL-2: 2-heptanone,

[0373] SL-3: cyclohexanone,

[0374] SL-4:  $\gamma$ -butyrolactone,

[0375] SL-5: propylene glycol monomethyl ether, and

[0376] SL-6: ethyl lactate.

[0377] It is apparent from the results of Table 3 that the resist compositions of the present invention are superior to those of the Comparative Examples in both the development residue and outgassing performance.

1. An actinic-ray- or radiation-sensitive resin composition comprising (A) any of the compounds of General Formula (I) below and (B) a resin that contains the residue (c) of a compound having an ionization potential value lower than that of phenol and when acted on by an acid, exhibits an increased solubility in an alkali developer,