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Subject: Compliance of Ablestik Products with the European Union [EU] directives on "Restriction of Hazardous Substances" [RoHS] and "End-of-Life Vehicles"[ELV]

To Whom It May Concern:

To minimize the environmental impact, EU restricts the use of certain hazardous substances, which include lead, cadmium, hexavalent chromium, mercury, polybrominated biphenyls [PBBs] and polybrominated diphenyl ethers [PBDEs] in the electrical and electronic equipment. To achieve reduction of these substances, the European Commission has created directives on "RoHS" and "ELV". Per these directives, the following limits have been imposed: lead, mercury, hexavalent chromium, PBBs and PBDEs: 0.1% w/w; cadmium: 0.01% w/w.

We have reviewed our formulations and Material Safety Data Sheet of each component. This review reveals that Ablestik does not use any cadmium, lead, mercury, hexavalent chromium, PBBs and PBDEs in formulation of our products. And none of the ingredients for our products exhibit significant levels of contamination by these heavy metals such that the final Ablestik products would be in violation of the EU directive limits for these substances.

Our review of the chemicals used in our formulations indicates that only silver may contain measurable cadmium, lead and/or mercury as an impurity. We checked with our silver suppliers and they have stated that they do not add any of those metals or their compounds to silver; however, those metals are present in very small amount [at the level of parts per million] as an impurity in silver they provide to Ablestik.

As a further verification, we selected a cross section of our major products for all substances restricted by the EU RoHS directives for analysis. The selection criteria was set to assure that all of our major chemistries and raw material types were included in the study. We believe the 148 products selected represent a good cross-section of products we make. Results of all products were "none detected". A copy of lab report would be provided upon request. On the basis of collected data, Ablestik has determined all products comply with the limits established in the EU's directives on "RoHS and "ELV".

Ablestik's paste and film adhesives products have been safely used for microelectronic applications for over 40 years. They provide an optimum balance of properties that enables the finished product to meet your stringent end use requirements.

Ablestik, as a Responsible Care Company, strives to protect the health and safety of our employees, our customers' employees, and the environment while providing technically superior products that offer unsurpassed value. If you have any questions about this information, please contact Safety, Health, and Environment Department of Ablestik:

In European Union, call to UK office: Phone #: 44 - (0) 1494 467 557; Fax #: 44 - (0) 1494 467 560

From other regions of world, call to USA office: Phone #: 1 - (310) 761-4819; Fax #: 1 - (310) 763-2725

Our service engineers are available to help purchasers obtain best results from our products, and recommendations are based on tests and information believed to be reliable. However, we have not control over the conditions under which our products are transported to, stored, handed, or used by purchasers and, in any event, all recommendations and sales are made on condition that we will not held liable for any damages resulting from their use. No representative of ours has any authority to waive or change this provision.

Metal Analysis of Ablestik Products

[Results are in ppm]

#	Product #	Lead	Cadmium	Mercury	Hexavalent Chromium
1	16-1LV	< 5.0	< 5.0	< 5.0	None detected
2	2000	None detected	None detected	None detected	None detected
3	2000B	None detected	None detected	None detected	None detected
4	2000T	None detected	None detected	None detected	None detected
5	2005A	< 5.0	< 5.0	< 5.0	None detected
6	2025	None detected	None detected	None detected	None detected
7	2025D	None detected	None detected	None detected	None detected
8	2025DS	None detected	None detected	None detected	None detected
9	2025DSI	None detected	None detected	None detected	None detected
10	2025M	None detected	None detected	None detected	None detected
11	2025N	None detected	None detected	None detected	None detected
12	2025NS	None detected	None detected	None detected	None detected
13	2028NS	None detected	None detected	None detected	None detected
14	2030SC	None detected	None detected	None detected	None detected
15	2033SC	< 5.0	< 5.0	< 5.0	None detected
16	2035SC	None detected	None detected	None detected	None detected
17	2053	None detected	None detected	None detected	None detected
18	2053S	None detected	None detected	None detected	None detected
19	2100A	None detected	None detected	None detected	None detected
20	2100AS	None detected	None detected	None detected	None detected
21	2100AT	None detected	None detected	None detected	None detected
22	2200	None detected	None detected	None detected	None detected
23	2200D	None detected	None detected	None detected	None detected
24	2200S	None detected	None detected	None detected	None detected
25	2288A	None detected	None detected	None detected	None detected
26	2300	None detected	None detected	None detected	None detected
27	2600AT	None detected	None detected	None detected	None detected
28	2600BT	None detected	None detected	None detected	None detected
29	2815	None detected	None detected	None detected	None detected
30	2815A	None detected	None detected	None detected	None detected
31	3003	None detected	None detected	None detected	None detected
32	3005	None detected	None detected	None detected	None detected
33	3185	None detected	None detected	None detected	None detected
34	3230	None detected	None detected	None detected	None detected

Metal Analysis of Ablestik Products

[Results are in ppm]

#	Product #	Lead	Cadmium	Mercury	Hexavalent Chromium
35	3280	None detected	None detected	None detected	None detected
36	400-12	None detected	None detected	None detected	None detected
37	481-20	None detected	None detected	None detected	None detected
38	5205TD	None detected	None detected	None detected	None detected
39	5220	None detected	None detected	None detected	None detected
40	5302CE	None detected	None detected	None detected	None detected
41	550	None detected	None detected	None detected	None detected
42	5500	None detected	None detected	None detected	None detected
43	6200	None detected	None detected	None detected	None detected
44	6201	None detected	None detected	None detected	None detected
45	6202C	None detected	None detected	None detected	None detected
46	7050	None detected	None detected	None detected	None detected
47	71-1D	None detected	None detected	None detected	None detected
48	77-1S	< 5.0	< 5.0	< 5.0	None detected
49	789-3	None detected	None detected	None detected	None detected
50	789-3 Black	None detected	None detected	None detected	None detected
51	7900	None detected	None detected	None detected	None detected
52	8006	None detected	None detected	None detected	None detected
53	8006NS	None detected	None detected	None detected	None detected
54	8007	None detected	None detected	None detected	None detected
55	8175A	None detected	None detected	None detected	None detected
56	8200T	< 5.0	< 5.0	< 5.0	None detected
57	8206	None detected	None detected	None detected	None detected
58	8210	None detected	None detected	None detected	None detected
59	826-1	None detected	None detected	None detected	None detected
60	826-1DS	None detected	None detected	None detected	None detected
61	826-1DS1	None detected	None detected	None detected	None detected
62	8290	None detected	None detected	None detected	None detected
63	8322A	None detected	None detected	None detected	None detected
64	8322C	None detected	None detected	None detected	None detected
65	8325	None detected	None detected	None detected	None detected
66	8340	None detected	None detected	None detected	None detected
67	8340A	None detected	None detected	None detected	None detected
68	8351C	None detected	None detected	None detected	None detected

Metal Analysis of Ablestik Products

[Results are in ppm]

#	Product #	Lead	Cadmium	Mercury	Hexavalent Chromium
69	8352L	None detected	None detected	None detected	None detected
70	8355F	None detected	None detected	None detected	None detected
71	8355F-S	None detected	None detected	None detected	None detected
72	8360	None detected	None detected	None detected	None detected
73	8360C	None detected	None detected	None detected	None detected
74	8360H	None detected	None detected	None detected	None detected
75	8360N	< 5.0	< 5.0	< 5.0	None detected
76	8361E	None detected	None detected	None detected	None detected
77	8361H	None detected	None detected	None detected	None detected
78	8361J	None detected	None detected	None detected	None detected
79	8380	< 5.0	< 5.0	< 5.0	None detected
80	8385	None detected	None detected	None detected	None detected
81	8387B	None detected	None detected	None detected	None detected
82	8390	None detected	None detected	None detected	None detected
83	8390A	None detected	None detected	None detected	None detected
84	8390C	None detected	None detected	None detected	None detected
85	8390P	None detected	None detected	None detected	None detected
86	8392	None detected	None detected	None detected	None detected
87	84-1A	None detected	None detected	None detected	None detected
88	84-1ALV	None detected	None detected	None detected	None detected
89	84-1LMI	None detected	None detected	None detected	None detected
90	84-1LMINB1	None detected	None detected	None detected	None detected
91	84-1LMIS	None detected	None detected	None detected	None detected
92	84-1LMIS1	None detected	None detected	None detected	None detected
93	84-1LMISNB	None detected	None detected	None detected	None detected
94	84-1LMISR4	None detected	None detected	None detected	None detected
95	84-1LMIT	None detected	None detected	None detected	None detected
96	84-1LMIT1	None detected	None detected	None detected	None detected
97	84-3	None detected	None detected	None detected	None detected
98	843-1	None detected	None detected	None detected	None detected
99	84-3B	None detected	None detected	None detected	None detected
100	84-3J	None detected	None detected	None detected	None detected
101	84-3LV	None detected	None detected	None detected	None detected
102	84-3MV	None detected	None detected	None detected	None detected

Metal Analysis of Ablestik Products

[Results are in ppm]

#	Product #	Lead	Cadmium	Mercury	Hexavalent Chromium
103	84-3MVB	None detected	None detected	None detected	None detected
104	84-3MVB1	None detected	None detected	None detected	None detected
105	8509	None detected	None detected	None detected	None detected
106	8510AA	None detected	None detected	None detected	None detected
107	8510B	None detected	None detected	None detected	None detected
108	8515	None detected	None detected	None detected	None detected
109	8700K	None detected	None detected	None detected	None detected
110	8726	None detected	None detected	None detected	None detected
111	8900NC	None detected	None detected	None detected	None detected
112	958-2	None detected	None detected	None detected	None detected
113	965-1L	None detected	None detected	None detected	None detected
114	967-1	None detected	None detected	None detected	None detected
115	967-3	None detected	None detected	None detected	None detected
116	968-2	None detected	None detected	None detected	None detected
117	A4502	None detected	None detected	None detected	None detected
118	AA01	None detected	None detected	None detected	None detected
119	AA03	None detected	None detected	None detected	None detected
120	AA50	None detected	None detected	None detected	None detected
121	AA50T	None detected	None detected	None detected	None detected
122	ATB-225	None detected	None detected	None detected	None detected
123	ATB-240	None detected	None detected	None detected	None detected
124	BF-4	None detected	None detected	None detected	None detected
125	GA-1E	None detected	None detected	None detected	None detected
126	GA-1ELV	None detected	None detected	None detected	None detected
127	JM1032A	< 5.0	< 5.0	< 5.0	None detected
128	JM2000LB	None detected	None detected	None detected	None detected
129	JM2500	None detected	None detected	None detected	None detected
130	JM2500AN	None detected	None detected	None detected	None detected
131	JM7000	<5.0	<5.0	<5.0	None detected
132	JM7100A	None detected	None detected	None detected	None detected
133	LM8895	None detected	None detected	None detected	None detected
134	LOC5500	None detected	None detected	None detected	None detected
135	LS5	None detected	None detected	None detected	None detected
136	MC723	None detected	None detected	None detected	None detected

Metal Analysis of Ablestik Products

[Results are in ppm]

#	Product #	Lead	Cadmium	Mercury	Hexavalent Chromium
137	RP646-9BB	None detected	None detected	None detected	None detected
138	RP783-4C	None detected	None detected	None detected	None detected
139	RP807-4J	None detected	None detected	None detected	None detected
140	UF8802A	None detected	None detected	None detected	None detected
141	UF8806H	None detected	None detected	None detected	None detected
142	UF8807	None detected	None detected	None detected	None detected
143	UF8826	None detected	None detected	None detected	None detected
144	UF8828	None detected	None detected	None detected	None detected
145	UF8829	None detected	None detected	None detected	None detected
146	WLUF8840	None detected	None detected	None detected	None detected
147	WLUF8845	None detected	None detected	None detected	None detected
148	XNF-1502	None detected	None detected	None detected	None detected

PBBs and PBDEs Analysis of Ablestik Products

[Results are in ppm]

#	Product #	Polybrominated Biphenyls (PBBs)	Polybrominated Diphenyl ethers (PBDEs)
1	2000	None detected	None detected
2	2000B	None detected	None detected
3	2000T	None detected	None detected
4	2005A	None detected	None detected
5	2025	None detected	None detected
6	2025D	None detected	None detected
7	2025DS	None detected	None detected
8	2025DSI	None detected	None detected
9	2025M	None detected	None detected
10	2025N	None detected	None detected
11	2025NS	None detected	None detected
12	2028NS	None detected	None detected
13	2030SC	None detected	None detected
14	2035SC	None detected	None detected
15	2053	None detected	None detected
16	2053S	None detected	None detected
17	2100A	None detected	None detected
18	2100AS	None detected	None detected
19	2200	None detected	None detected
20	2200D	None detected	None detected
21	2200S	None detected	None detected
22	2288A	None detected	None detected
23	2300	None detected	None detected
24	2600AT	None detected	None detected
25	2600BT	None detected	None detected
26	2815	None detected	None detected
27	3003	None detected	None detected
28	3005	None detected	None detected
29	3185	None detected	None detected
30	3230	None detected	None detected
31	3280	None detected	None detected
32	400-12	None detected	None detected
33	4049	None detected	None detected
34	5205TD	None detected	None detected
35	5302CE	None detected	None detected
36	550	None detected	None detected
37	5500	None detected	None detected
38	6200	None detected	None detected
39	6201	None detected	None detected
40	6202C	None detected	None detected
41	7050	None detected	None detected

PBBs and PBDEs Analysis of Ablestik Products

[Results are in ppm]

#	Product #	Polybrominated Biphenyls (PBBs)	Polybrominated Diphenyl ethers (PBDEs)
42	71-1D	None detected	None detected
43	789-3	None detected	None detected
44	789-3 Black	None detected	None detected
45	7900	None detected	None detected
46	8006	None detected	None detected
47	8006NS	None detected	None detected
48	8007	None detected	None detected
49	8175A	None detected	None detected
50	8200T	None detected	None detected
51	8206	None detected	None detected
52	8210	None detected	None detected
53	826-1	None detected	None detected
54	826-1DS	None detected	None detected
55	8290	None detected	None detected
56	8322A	None detected	None detected
57	8340	None detected	None detected
58	8340A	None detected	None detected
59	8351C	None detected	None detected
60	8352L	None detected	None detected
61	8355F	None detected	None detected
62	8355FS	None detected	None detected
63	8360	None detected	None detected
64	8360C	None detected	None detected
65	8360H	None detected	None detected
66	8361E	None detected	None detected
67	8361H	None detected	None detected
68	8361J	None detected	None detected
69	8385	None detected	None detected
70	8387B	None detected	None detected
71	8390	None detected	None detected
72	8390A	None detected	None detected
73	8390C	None detected	None detected
74	8390P	None detected	None detected
75	8392	None detected	None detected
76	84-1A	None detected	None detected
77	84-1ALV	None detected	None detected
78	84-1LMI	None detected	None detected
79	84-1LMINB1	None detected	None detected
80	84-1LMIS	None detected	None detected
81	84-1LMIS1	None detected	None detected

PBBs and PBDEs Analysis of Ablestik Products

[Results are in ppm]

#	Product #	Polybrominated Biphenyls (PBBs)	Polybrominated Diphenyl ethers (PBDEs)
82	84-1LMISNB	None detected	None detected
83	84-1LMISR4	None detected	None detected
84	84-1LMISR4K	None detected	None detected
85	84-1LMIT	None detected	None detected
86	84-1LMIT1	None detected	None detected
87	84-3	None detected	None detected
88	843-1	None detected	None detected
89	84-3B	None detected	None detected
90	84-3J	None detected	None detected
91	84-3LV	None detected	None detected
92	84-3MV	None detected	None detected
93	84-3MVB	None detected	None detected
94	84-3MVB1	None detected	None detected
95	8509	None detected	None detected
96	8510AA	None detected	None detected
97	8515	None detected	None detected
98	8700K	None detected	None detected
99	8726	None detected	None detected
100	8900NC	None detected	None detected
101	958-2	None detected	None detected
102	965-1L	None detected	None detected
103	967-1	None detected	None detected
104	967-3	None detected	None detected
105	968-2	None detected	None detected
106	A4049	None detected	None detected
107	A4502	None detected	None detected
108	AA01	None detected	None detected
109	AA03	None detected	None detected
110	AA50	None detected	None detected
111	AA50T	None detected	None detected
112	ATB-225	None detected	None detected
113	ATB-240	None detected	None detected
114	BF-4	None detected	None detected
115	GA-1E	None detected	None detected
116	GA-1ELV	None detected	None detected
117	JM2000LB	None detected	None detected
118	JM2500	None detected	None detected
119	JM2500AN	None detected	None detected
120	JM7000	None detected	None detected
121	JM7100A	None detected	None detected
122	LM8895	None detected	None detected

PBBs and PBDEs Analysis of Ablestik Products

[Results are in ppm]

#	Product #	Polybrominated Biphenyls (PBBs)	Polybrominated Diphenyl ethers (PBDEs)
123	LOC5500	None detected	None detected
124	LS-5	None detected	None detected
125	MC723	None detected	None detected
126	RP646-9BB	None detected	None detected
127	RP783-4C	None detected	None detected
128	RP807-4J	None detected	None detected
129	UF8802A	None detected	None detected
130	UF8806H	None detected	None detected
131	UF8807	None detected	None detected
132	UF8826	None detected	None detected
133	UF8828	None detected	None detected
134	UF8829	None detected	None detected
135	WLUF8840	None detected	None detected
136	WLUF8845	None detected	None detected
137	XNF-1502	None detected	None detected