



AN ELLSWORTH ADHESIVES COMPANY 

Low Halogen and Halogen-Free Adhesives

The adhesives and encapsulants listed below with * will conform to the halogen-free standard and provide reliability in electronic applications. Low levels of chlorine promote resistance to corrosion and electromigration when exposed to elevated temperatures and moisture. Other products have halogen content listed and in certain cases may be considered 'low halogen content' depending on the relevant standard and the application requirements.

These products also have an appealing Extremely Hazardous Substance (EHS) profile as they also do not contain lead, cadmium, mercury, or hexavalent chromium. These materials comply with the Waste Electrical and Electronic Equipment Directive (WEEE) and Restriction of Hazardous Substances Directive (RoHS), they have been tested to be free of PBB (polybrominated biphenyls) and PBDE (polybrominated diphenyl ether) compounds and were not formulated with any restricted phthalates.

*Halogen free per IEC 61249-2-21 ≤ 900 ppm maximum Cl, ≤ 900 ppm maximum Br and ≤ 1500 maximum total halogens. International Electrochemical Commission, Restriction Use of Halogen.

Part #	Chlorine	Bromine	Fluorine	Iodine	Pb, Cd, Hg, CrVI	PBB/PBDE	Halogen
EPI285/HD9*	1,244 ppm	<50 ppm	<50 ppm	<50 ppm	<2 ppm	<5 ppm	Yes
EPI285/HD12	996 ppm	<50 ppm	<50 ppm	<50 ppm	<2 ppm	<5 ppm	No
EPI295 Black	980 ppm	<50 ppm	<50 ppm	<50 ppm	<2 ppm	<5 ppm	No
EPI296*	266 – 450 ppm	<50 ppm	<50 ppm	<50 ppm	<2 ppm	<5 ppm	Yes
EP691	Not tested	Not tested	Not tested	Not tested	<2 ppm	<5 ppm	No
EPI190	981 ppm	38,028 ppm	<50 ppm	<50 ppm	Not tested	Not tested	No
EPI195	1,962 ppm	<50 ppm	121 ppm	<50 ppm	<2 ppm	<5 ppm	No
EPI200	2,935 ppm	<50 ppm	<50 ppm	<50 ppm	<2 ppm	<5 ppm	No
EPI240RC	1,104 ppm	83,669 ppm	408 ppm	<50 ppm	Not tested	Not tested	No
EPI282 Black	4,686 ppm	<50 ppm	<50 ppm	<50 ppm	<2 ppm	<5 ppm	No
EPI282 Clear	4,618 ppm	<50 ppm	<50 ppm	<50 ppm	<2 ppm	<5 ppm	No
EPI305 Black	3,174 ppm	<50 ppm	<50 ppm	<50 ppm	<2 ppm	<5 ppm	No
EPI305LV Black	3,319 ppm	<50 ppm	<50 ppm	<50 ppm	<2 ppm	<5 ppm	No
EPI320	1,093 ppm	<50 ppm	556 ppm	<50 ppm	<2 ppm	<5 ppm	No

Part #	Chlorine	Bromine	Fluorine	Iodine	Pb, Cd, Hg, CrVI	PBB/PBDE	Halogen
EPI320LV	4,801 ppm	<50 ppm	483 ppm	<50 ppm	<2 ppm	<5 ppm	No
EPI330	2,841 ppm	<50 ppm	<50 ppm	<50 ppm	<2 ppm	<5 ppm	No
EPI330LV	2,243 ppm	<50 ppm	<50 ppm	<50 ppm	<2 ppm	<5 ppm	No
EPI340	2,855 ppm	<50 ppm	<50 ppm	<50 ppm	Not tested	Not tested	No
EP3112	24,924 ppm	<50 ppm	<50 ppm	<50 ppm	Not tested	Not tested	No
EPI390	4,951 ppm	<50 ppm	<50 ppm	<50 ppm	Not tested	Not tested	No
EP3115	1,623 ppm	<50 ppm	<50 ppm	<50 ppm	<2 ppm	<5 ppm	No
EP3122	1,250 ppm	<50 ppm	<50 ppm	<50 ppm	<2 ppm	<5 ppm	No
EP3123	6,027 ppm	<50 ppm	<50 ppm	<50 ppm	<2 ppm	<5 ppm	No
EP3123 Blue	6,067 ppm	887 ppm	<50 ppm	<50 ppm	<2 ppm	<5 ppm	No
SEC1222*	<50 ppm	<50 ppm	<50 ppm	<50 ppm	<2 ppm	<5 ppm	Yes
SEC1233*	<50 ppm	<50 ppm	<50 ppm	<50 ppm	<2 ppm	<5 ppm	Yes
SEC1244*	<50 ppm	<50 ppm	<50 ppm	<50 ppm	<2 ppm	<5 ppm	Yes
UR3001HP Black*	<50 ppm	<50 ppm	<50 ppm	<50 ppm	<2 ppm	<5 ppm	Yes
UR3001HP Clear*	<50 ppm	<50 ppm	<50 ppm	<50 ppm	<2 ppm	<5 ppm	Yes