

Material declaration for EN11-HSB1AF15

No content here is banned per E.U. RoHS. Average mass of these EN11 encoders is 3.7 grams each
Weights above one milligram rounded to the nearest mg. Values less than 1 mg given in scientific notation.

Sub-component	Material	% of Total Mass	Substance Name	CAS #	Substance Weight (grams)	Special Classification
Shaft	Al alloy	29.81%	Si	7440-21-3	0.0044	RoHS exempt, Pb in Al
			Fe	7439-89-6	0.0077	
			Cu	7440-50-8	0.0552	
			Mn	7439-96-5	5.52E-04	
			Mg	7439-95-4	0.0052	
			Pb	7439-92-1	0.0022	
			Bi	7440-69-9	0.0022	
			Zn	7440-66-6	0.0033	
Cover	PBT blend	1.65%	PBT polymer	30965-26-5	0.0214	Halogenated epoxy, contains BPA Antimony fire retardant
			Brominated epoxy resin	68928-70-1	0.0153	
			Antimony oxide	1309-64-4	0.0061	
			Glass fiber	65997-17-3	0.0183	
Ring button	Steel	3.35%	C	7440-44-0	0.0010	
			Si	7440-21-3	2.48E-04	
			Mn	7439-96-5	5.33E-04	
			P	7723-14-0	1.20E-05	
			S	7704-34-9	1.20E-05	
			Cu	7440-50-8	2.50E-05	
			Fe	7439-89-6	0.1222	
Frame	Steel	25.53%	C	231-153-3	0.0019	
			Mn	231-105-1	0.0019	
			P	231-768-7	3.78E-04	
			S	231-722-6	3.78E-04	
			Si	231-130-8	0.0028	
			Al	231-072-3	4.16E-04	
			Fe	231-096-4	0.9367	
Shaft set	Zn alloy	32.95%	Al	7429-90-5	0.0488	RoHS allowed, Pb below 0.1% threshold
			Cu	7440-50-8	0.0061	
			Mg	7439-95-4	6.10E-04	
			Fe	7439-89-6	1.22E-04	
			Pb	7439-92-1	1.20E-05	
			Cd	7440-43-9	1.00E-06	
			Sn	7440-31-5	1.00E-06	
			Zn	7440-66-6	1.1634	
			Conductor base	POM	1.05%	
			Stabilizer	unknown	7.79E-04	
Click	Steel	0.27%	C	7440-44-0	7.00E-06	
			Si	7440-21-3	5.00E-06	
			Mn	7439-96-5	1.14E-04	
			P	7723-14-0	3.00E-06	
			S	7704-34-9	1.00E-06	
			Cr	7440-47-3	0.0018	
			Ni	7440-02-0	8.31E-04	
			Fe	7439-89-6	0.0072	
Spacer plate	Steel	0.27%	C	7440-44-0	7.00E-06	
			Si	7440-21-3	5.00E-06	
			Mn	7439-96-5	1.14E-04	
			P	7723-14-0	3.00E-06	
			S	7704-34-9	1.00E-06	
			Cr	7440-47-3	0.0018	
			Ni	7440-02-0	8.31E-04	
			Fe	7439-89-6	0.0072	
Conductor	Phosphor bronze	1.27%	Cu	7440-50-8	0.0431	RoHS exempt, Pb in Cu
			Sn	7440-31-5	0.0038	
			Zn	7440-66-6	9.40E-05	
			Pb	7439-92-1	5.00E-06	
			Fe	7439-89-6	1.90E-05	
			P	7723-14-0	2.40E-05	
			Ag plating	Ag	0.30%	
Slider base	PBT blend	2.22%	PBT polymer	30965-26-5	0.0287	

			Brominated epoxy resin	68928-70-1	0.0205	Halogenated epoxy, contains BPA Antimony fire retardant
			Antimony oxide	1309-64-4	0.0082	
			Glass fiber	65997-17-3	0.0246	
Slider	Phosphor bronze	1.16%	Cu	7440-50-8	0.0394	RoHS exempt, Pb in Cu
			Sn	7440-31-5	0.0034	
			Zn	7440-66-6	8.60E-05	
			Pb	7439-92-1	4.00E-06	
			Fe	7439-89-6	1.70E-05	
			P	7723-14-0	2.20E-05	
			Ag plating	506-64-9	0.0020	
Lubricating oil	PAO lubricant	0.05%	Polyisobutylene	9003-27-4	3.60E-04	
			PAO	68037-01-4	0.0016	
			Fumed silica	68611-44-9	4.00E-05	
Shaft oil	PAO lubricant	0.05%	Polyisobutylene	9003-27-4	0.0012	
			PAO	68037-01-4	7.00E-04	
			Fumed silica	68611-44-9	1.00E-04	