MATERIAL DECLARATION SHEET

BOURNS®

Material Number	SSD-100A		
Product Line	Sensors & Controls		
Compliance Date	5/28/2024		
RoHS Compliant	Yes	MSL	N/A

No.	Construction Element (subpart)	Homogeneous Material	Material weight [g]	Homogeneous Material/ Substances	CASRN if applicable	Materials Mass %	Material Mass % of total unit wt.	Subpart mass of total wt. (%)
1	Multilayer	Electro plating	0.00004	Nickel	7440-02-0	100	0.00007	0.02325
			0.00015	Copper	7440-50-8	100	0.00025	
			0.00022	Tin	7440-31-5	100	0.00037	
		Silver Electrode	0.00048	Silver	7440-22-4	100	0.00080	
		Terminal Electrode	0.00032	Silver	7440-22-4	88	0.00047	
				Silicon dioxide	60676-86-0	4	0.00002	
				Glass without declarable substances materials	-	8	0.00004	
		Multilayer Ferrite Inductors	0.01279	Copper	7440-50-8	4	0.00085	
				Nickel	7440-02-0	3	0.00064	
				Ferrite	7439-89-6	89	0.01891	
				Zinc	7440-66-6	4	0.00085	
2	Electrical Connector 1	Body	0.18	Carbon black	1333-86-4	10	0.02990	0.60163
				Liquid Crystal Polymer	70679-92-4	50	0.14949	
				Further Additives, not to declare	system	10	0.02990	
				Glass Fiber	65997-17-3	30	0.08969	

		Terminals	0.172	Copper	7440-50-8	85	0.24284	
				Zinc	7440-66-6	15	0.04285	
		Nickel underplating	0.0064	Nickel	7440-02-0	100	0.01063	
		Tin underplating	0.0034	TIN	7440-31-5	100	0.00565	
		Gold Plating	0.000408	Cobalt	7440-48-4	10	0.00007	
				Nickel	7440-02-0	10	0.00007	
				Gold	7440-57-5	80	0.00054	
3	Electrical Connector 2 (X2)	Body	0.68	Carbon black	1333-86-4	10	0.11295	1.76800
				Liquid Crystal Polymer	70679-92-4	60	0.67769	
				Further Additives, not to declare	system	10	0.11295	
				Glass Fiber	65997-17-3	30	0.33884	
		Terminals	0.364	Copper	7440-50-8	85	0.51391	
				Zinc	7440-66-6	15	0.09069	
		Nickel underplating	0.0128	Nickel	7440-02-0	100	0.02126	
		Tin underplating	0.0068	TIN	7440-31-5	100	0.01129	
		Gold Plating	0.000816	Cobalt	7440-48-4	10	0.00014	
				Nickel	7440-02-0	10	0.00014	
				Gold	7440-57-5	80	0.00108	
4	Screw (X2)	A2 Stainless-Steel	0.508	Carbon	7440-44-0	0.15	0.00127	0.84379
				Manganese	7439-96-5	2	0.01688	
				Phosphorus	7723-14-0	0.2	0.00169	
				Sulfur	7704-34-9	0.15	0.00127	
				Silicon	7440-21-3	0.9	0.00759	

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				Chromium	7440-47-3	18	0.15188	
				Nickel	7440-02-0	9	0.07594	
				Iron	7439-89-6	69	0.58221	
				Molybdenum	7439-98-7	0.6	0.00506	
5	Voltage Regulator	Gold wire	0.0089340	Gold	7440-57-5	100	0.01484	0.02931
		Die Attach Adhesive	0.0016434	Silver	7440-22-4	79.99993	0.00218	
				Epoxy	85954-11-6	20.00007	0.00055	
		Copper and Its Alloys	0.0054614	Copper	7440-50-8	97.41	0.00884	
				Iron	7439-89-6	2.38	0.00022	
				Phosphorus	7723-14-0	0.083994	0.00001	
				Zinc	7440-66-6	0.126006	0.00001	
		Lead Frame Plating	0.0012400	Nickel	7440-02-0	95.11982	0.00196	
				Gold	7440-57-5	0.780172	0.00002	
				Palladium	7440-05-3	4.1	0.00008	
		Mold Compound	0.0000849	Fused Silica	60676-86-0	85.9999	0.00012	
				Carbon Black	1333-86-4	0.5	0.00000	
				Epoxy	85954-11-6	13.5	0.00002	
		Ceramics / Glass	0.0002850	Silicon	7440-21-3	100	0.00029	
6	Diodes & Rectifiers	Die Doped Silicon	0.000208	Silicon	7440-21-3	100	0.00035	0.01732
		Lead Frame	0.0024	Iron	7439-89-6	57.65	0.00230	
				Nickel	7440-02-0	41	5.92413	
				Manganese	7439-96-5	0.6	0.00002	
				Chromium	7440-47-3	0.1	0.00000	
				Cobalt	7440-48-4	0.5	0.00002	

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				Silicon	7440-21-3	0.15	0.00001	
		Lead Frame plating	0.000091	Silver	7440-22-4	100	0.00015	
		Wire Bonding	0.000052	Gold	7440-57-5	100	0.00009	
		Molding Compound	0.006601	Silicon Dioxide	7631-86-9	83	0.00910	
				Zinc Oxide	1314-13-2	1	0.00011	
				Phenol-formaldehyde polymer	9003-35-4	10	0.00110	
				Boron zinc hydroxide oxide	138265-88-0	5	0.00055	
				Carbon black	1333-86-4	1	0.00011	
		Die Attach Epoxy	0.00086	Silver	7440-22-4	75	0.00107	
				Epoxy resin	Trade secret	25	0.00036	
		Tin Plating	0.000213	Tin	7440-31-5	100	0.00035	
7	Voltage Regulators	Bond Wire	0.000023	Gold	7440-57-5	100	0.00004	0.03057
		Die Attach Adhesive	0.000287	Silver	7440-22-4	79.99	0.00038	
				Epoxy	85954-11-6	20	0.00010	
		Lead Frame	0.006460	Copper	7440-50-8	97.41	0.01045	
				Iron	7439-89-6	2.38	0.00026	
				Phosphorus	7723-14-0	0.08399	0.00001	
				Zinc	7440-66-6	0.126	0.00001	
		Lead Frame Plating	0.000116	Nickel	7440-02-0	95.11	0.00018	
				Gold	7440-57-5	0.7801	0.00000	
				Palladium	7440-05-3	4.1	0.00001	

		Mold Compound	0.010895	Fused Silica	60676-86-0	85.99	0.01556	
				Carbon Black	1333-86-4	0.5	0.00009	
				Epoxy	85954-11-6	13.5	0.00244	
		Ceramics / Glass	0.000623	Doped Silicon	7440-21-3	100	0.00104	
8	Power Transformers	Header filled thermoplastics.	0.05837	Aluminum hydroxide	21645-51-2	40	0.03878	0.16610
				Glass fiber	65997-17-3	30	0.02909	
				Diallyl phthalate resin	25035-78-3	25	0.02424	
				Antimonyoxide (Sb2O3)	1309-64-4	4.5	0.00436	
				Carbon black	1333-86-4	0.5	0.00048	
		Terminal copper alloys	0.00767	Copper	7440-50-8	93.45	0.01191	
				Tin	7440-31-5	6.05	0.00077	
				Phosphorus	7723-14-0	0.35	0.00004	
				Zinc	7440-66-6	0.1	0.00001	
				Iron	7439-89-6	0.05	0.00001	
		Terminal Plating Special metals	0.0004	Nickel	7440-02-0	34	0.00023	
				Tin	7440-31-5	66	0.00044	
		Ceramics/glass	0.01459	Ironoxide (Fe3O4)	1317-61-9	70	0.01696	
				Manganeseoxide (Mn3O4)	1317-35-7	17	0.00412	
				Zincoxide (ZnO)	1314-13-2	13	0.00315	
		Wire Copper	0.003593	Copper	7440-50-8	98.7	0.00589	

				Tin	7440-31-5	1.3	0.00008	
		Wire Lacquers	0.0003460	Polymer with tetrafluoroethene	26655-00-5	99.91	0.00057	
		Solder	0.0041900	Tin	7440-31-5	96	0.00668	
				Silver	7440-22-4	4	0.00028	
		Core Coating	0.0001500	Paracyclophane	1633-22-3	99	0.00025	
				Trade secret	N/A	1	0.0000025	
		Wire Copper In cable harnesses	0.0018391	Copper	7440-50-8	100	0.00305	
		Wire Lacquers	0.0003309	Polyurethane	9009-54-5	94.4	0.00052	
				Polyamide resin	70024-79-2	5.6	0.00003	
		Wire Copper Alloy	0.0014453	Copper	7440-50-8	100	0.00240	
		Wire Tin Plating	0.0000447	Tin	7440-31-5	100	0.00007	
		Wire Isolation Lacquers	0.00153881	polymer with tetrafluoroethene	26655-00-5	99.58	0.00255	
				C.I. Pigment Blue 28	1345-16-0	0.18	0.000005	
				Titanium oxide (TiO2)	13463-67-7	0.18	0.000005	
				C.I. Pigment Green 50	68186-85-6	0.06	0.000002	
		Wire Isolation Copper Alloy	0.00093119	Copper	7440-50-8	97.95	0.00152	
				Tin	7440-31-5	2.05	0.00003	
		Adhesive Sealants	0.00239	Bisphenol A Di glycidyl ether resin	25068-38-6	50	0.00198	

				Talc	14807-96-6	14	0.00056	
				Crystalline silica	14808-60-7	10	0.00040	
				Titanium oxide (TiO2)	13463-67-7	1	0.00004	
				Limestone	1317-65-3	25	0.00099	
		Wire Copper amounts in cable harnesses	0.0020832	Copper	7440-50-8	100	0.00346	
		Wire Lacquers	0.0000868	Polyurethane	9009-54-5	100	0.00014	
9	Capacitor	Ceramic element	0.01511	Barium oxide	1304-28-5	60	0.01505	0.03963
				Titanium dioxide	13463-67-7	30	-	
				Mic	-	10	-	
		Outer electrode	0.00213	Copper	7440-50-8	100	0.00354	
			0.00029	Glass Di boron trioxide	1303-86-2	20	0.00010	
				Silicon dioxide	7631-86-9	80	-	
		Nickel Plating	0.00011	Nickel plating	7440-02-0	100	0.00019	
		Inner electrode	0.00310	Nickel	7440-02-0	100	0.00515	
		Tin Plating	0.00312	Tin plating	7440-31-5	100	0.00518	
10	Semiconductor SMAJ-Q	Dice- Silicon	0.00133	Silicon	7440-21-3	60.18	0.00133	0.10386
				Phosphorus	7723-14-0	0.01	0.00000	
				Boron	7440-42-8	0.01	0.00000	
				Nickel	7440-02-0	14.8	0.00033	
				Lead	7439-92-1	12.5	0.00028	
				Silicon Dioxide	7631-86-9	10	0.00022	
				Aluminum oxide	1344-28-1	2.5	0.00006	
		Solder paste	0.00200	Tin	7440-31-5	5	0.00017	
				Lead	7439-92-1	92.5	0.00308	

				Silver	7440-22-4	2.5	0.00008	
		Copper Lead frame	0.02750	Copper	7440-50-8	99.8	0.04559	
				Iron	7439-89-6	0.15	0.00007	
				Phosphorus	7723-14-0	0.05	0.00002	
		Molding compound Epoxy	0.0310350	Silicon dioxide	14808-60-7	76	0.03918	
				Epoxy resing	25928-94-3	9	0.00464	
				Phenolic resin-A,B	9003-35-4	8	0.00412	
				Hydroxide metal	-	6	0.00309	
				Carbon black	1333-86-4	1	0.00052	
		Tin Plating	0.0006630	Tin	7440-315	100	0.00110	
11	Semiconductor OT	Mold Compound	0.012770	Silica, vitreous	60676-86-0	86.91	0.01843	0.02624
				Epoxy Resin	Trade secret	7.67	0.00163	
				Phenolic Resin	Trade secret	5.11	0.00108	
				Carbon black	1333-86-4	0.31	0.00007	
		Lead Frame	0.00168	Copper	7440-50-8	95.54	0.00267	
				Iron	7439-89-6	2.35	0.00007	
				Silver	7440-22-4	1.91	0.00005	
				Zinc	7440-66-6	0.13	0.00000	
				Phosphorus	7723-14-0	0.08	0.00000	
		Die Attach	0.00012	Silver (Ag)	7440-22-4	75	0.00015	
				Modified Epoxy Resin	13561-08-5	14	0.00003	
				Diglycidylether of bisphenol-F	54208-68-8	7.5	0.00001	
				Modified Amine	827-43-0	3.5	0.00001	
		Chip (Die)	0.00120	Doped Silicon	7440-21-3	100	0.00199	
		Wire Bond	0.00003	Copper	7440-50-8	98.25	0.00005	
				Palladium	5/3/7440	1.75	0.00000	
12	Converter	Header	0.482787	Antimony oxide	1309-64-4	4.5	0.03609	1.37132
				Carbon black	1333-86-4	0.5	0.00401	
				Aluminum hydroxide.	21645-51-2	40	0.32076	

				Diallyl phthalate resin	25035-78-3	25	0.20048	
				Glass fiber	65997-17-3	30	0.24057	
		Terminal	0.063405	Iron	7439-89-6	0.05	0.00005	
				Tin	7440-31-5	6.05	0.00637	
				Copper	7440-50-8	93.45	0.09842	
				Zinc	7440-66-6	0.1	0.00011	
				Phosphorus	7723-14-0	0.35	0.00037	
		Terminal Plating	0.003341	Nickel	7440-02-0	34	0.00189	
				Tin	7440-31-5	66	0.00366	
		Core	0.119681	Zinc Oxide	1314-13-2	13	0.02584	
				Manganese ixide	1317-35-7	17	0.03379	
				Iron Ixide	1317-61-9	70	0.13915	
		Wire Copper	0.029693	Tin	7440-31-5	1.3	0.00064	
				Copper	7440-50-8	98.7	0.04868	
		Wire Lacquers	0.002812	Carbon Black	1333-86-4	0.09	0.000004	
				Propane, heptafluoro3 -(trifluoroethenyl)	26655-00-5	99.91	0.004667	
		Solder	0.034570	Silver	7440-22-4	4	0.00230	
				Tin	7440-31-5	96	0.05512	
		Core Coating	0.001216	Paracyclophane	1633-22-3	99	0.00200	
				Trade secret	N/A	1	0.00002	
		Wire Copper	0.015219	Copper	7440-50-8	100	0.02528	
		Wire Lacquers	0.002729	Polyamide resin	70024-79-2	5.6	0.00025	
				Polyurethane	9009-54-5	94.4	0.00428	
		Wire copper Alloy	0.011910	Copper	7440-50-8	100	0.01978	
		Wire Tin Plating	0.000368	Tin	7440-31-5	100	0.00061	
		Wire Isolation Lacquers	0.012570	Pigment Blue 28	1345-16-0	0.18	0.00004	
				Titanium oxide (TiO2)	13463-67-7	0.18	0.00004	

				Propane, heptafluoro3 - (trifluoroethenyl)	26655-00-5	99.58	0.02079	
				Pigment Blue 50	68186-85-6	0.06	0.00001	
		Wire Isolation Copper Alloy	0.007609	Tin	7440-31-5	2.05	0.00026	
				Copper	7440-50-8	97.95	0.01238	
		Adhesive	0.019768	Limestone	1317-65-3	25	0.00033	
				Titanium oxide (TiO2)	13463-67-7	1	0.00033	
				Talc	14807-96-6	14	0.00460	
				Crystalline silica	14808-60-7	10	0.00328	
				Bisphenol A Diglycidyl ether resin	25068-38-6	50	0.01642	
		Wire Copper	0.015798	Copper	7440-50-8	100	0.02624	
		Wire Lacquers	0.002119	Polyurethane	9009-54-5	100	0.00352	
13	Voltage Regulators	Wire Bond	0.00002330	Gold	7440-57-5	100	0.00004	0.02677
		Die Attach Adhesive	0.00028724	Silver	7440-22-4	80	0.00038	
				Epoxy	85954-11-6	20	0.00010	
		Lead Frame	0.006460	Copper	7440-50-8	97.41	0.01045	
				Iron	7439-89-6	2.38	0.00025538	
				Phosphorus	7723-14-0	0.084	0.00000901	
				Zinc	7440-66-6	0.13	0.00001395	
		Lead Frame Plating	0.000116	Nickel	7440-02-0	95.12	0.00018	
				Gold	7440-57-5	0.78	0.0000015	
				Palladium	7440-05-3	4.10	0.000008	
		Mold Compound	0.00836270	Fused Silica	60676-86-0	86	0.01195	
				Carbon Black	1333-86-4	0.5	0.00007	
				Epoxy	85954-11-6	13.5	0.00188	
		Semiconductor Device	0.00087034	Doped Silicon	7440-21-3	100	0.00145	
14	Analog to Digital	Wire Bond	0.0000612113	Copper	7440-50-8	97.535	0.00010	0.18479
				Proprietary Materials	Trade secret	0.011	0.00000001	

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	Converters			Gold	7440-57-5	0.052	0.00000005	
				Palladium	7440-05-3	2.399	0.00000244	
				Silver	7440-22-4	0.003	0.000000003	
		Die Attach Adhesive	0.00068465	Silver	7440-22-4	80	0.00091	
				Epoxy	85954-11-6	20	0.00023	
		Lead Frame	0.06050000	Copper	7440-50-8	97.061	0.09754	
				Iron	7439-89-6	2.59	0.00260	
				Phosphorus	7723-14-0	0.149	0.00015	
				Lead	7439-92-1	0.01	0.000010	
				Zinc	7440-66-6	0.19	0.000191	
		Lead Frame Plating	0.00083000	Nickel	7440-02-0	95.12	0.000011	
				Gold	7440-57-5	0.78	0.000011	
				Palladium	7440-05-3	4.1	0.000057	
		Mold Compound	0.04693628	Fused Silica	60676-86-0	86	0.06705	
				Carbon Black	1333-86-4	0.3	0.00023	
				Epoxy	85954-11-6	13.7	0.01068	
		Semiconductor Device	0.00224075	Doped Silicon	7440-21-3	100	0.00372	
15	Interface Drivers Receivers	Wire Bond	0.00021902	Calcium	7440-70-2	0.000457	0.0000000017	0.65221
				Yttrium	7440-65-5	0.000913	0.0000000033	
				Gold	7440-57-5	99.99772	0.0003637846	
				Silver	7440-22-4	0.000913	0.0000000033	
		Die Attach Adhesive	0.0010068000	Silver	7440-22-4	75	0.001254	
				Epoxy	85954-11-6	25	0.0004181	
		Lead Frame	0.1785800000	Copper	7440-50-8	97.05	0.287872	
				Iron	7439-89-6	2.6	0.007712	
				Phosphorus	7723-14-0	0.15	0.000445	
				Zinc	7440-66-6	0.2	0.000593	
		Lead Frame	0.00062000	Nickel	7440-02-0	95.12	0.000980	

		Plating		Gold	7440-57-5	0.78	0.000008	
				Palladium	7440-05-3	4.1	0.000042	
		Mold Compound	0.20855000	Fused Silica	60676-86-0	89.5	0.31003	
				Carbon Black	1333-86-4	0.5	0.00173	
				Chlorine	7782-50-5	0.002	0.00001	
				Epoxy	85954-11-6	9.998	0.03463	
		Semiconductor Device	0.00368275	Doped Silicon	7440-21-3	100	0.00612	
16	DC Converters	Ferrite core	0.024350	Iron oxide (Fe2O3)	1332-37-2	30	0.01213	0.08508
				Copper oxide	1317-38-0	20	0.00809	
				Nickel monoxide	1313-99-1	40	0.01618	
				Zinc oxide	1314-13-2	10	0.00404	
		Wire	0.007013	Polyurethane ester foam	9009-54-5	10	0.00116	
				Copper	7440-50-8	90	0.01048	
		Epoxy	0.00456600	Bisphenol-A-(epichlorhydrin); epoxy resin	25068-38-6	100	0.00758	
		Terminal	0.000310	Silver	7440-22-4	100	0.00051	
		Plating	0.000540	Nickel	7440-02-0	33	0.00030	
				Tin	7440-31-5	67	0.00060	
		Marking	0.000001	Cellulose, nitrate	9004-70-0	20	0.00000033	
				Nitrogen	7727-37-9	80	0.00000133	
		Paste	0.00100000	Amines, tallow alkyl, ethoxylated	61791-26-2	20	0.00033	
				Carboxylic acids, di	68937-72-4	10	0.00017	
				Silver	7440-22-4	25	0.00042	
				Tin	7440-31-5	45	0.00075	
		Plating	0.00353152	Copper	7440-50-8	100	0.00587	
		Solder mask	0.00034954	Modified eposy resin	Trade Secret	16	0.00587	
				organic substance	Trade secret	30	0.00017	

				Barium sulphate	7727-43-7	7	0.00004	
				1-Butanol,3-methoxy-3-methyl-,acetate)	Trade secret	7	0.00004	
				Solvent naphtha(heavy arom)	Trade secret	25	0.00015	
				Talc (Mg3H2(SiO3)4)	14807-96-6	10	0.00006	
				Silicon ,vitreous	Trade secret	5	0.00003	
		Prepreg	0.00155642	Silicon dioxide	7631-86-9	60	0.00155	
				Glass, oxide, chemicals	65997-17-3	35	0.00090	
				epoxy resin b	trade secret	5	0.00013	
		ABF	0.00609300	Silicon dioxide	7631-86-9	48	0.00486	
				reaction product: bisphenol-A-(epichlorhydrin); epoxy resin	25068-38-6	15	0.00152	
				Formaldehyde, polymer with 2-(chloromethyl)oxirane and phenol	9003-36-5	15	0.00152	
				Oxirane, 2,2'-[1,6-naphthalenediylbis(oxymethylene)]bis-	27610-48-6	20	0.00202	
				Solvent naphtha (petroleum), heavy arom.	64742-94-5	2	0.00020	
				others	trade secret	5	0.00051	
		Ceramics / Glass	0.00191160	Silicon	7440-21-3	100	0.00318	
17	Polyphenylene Sulfide	Fiber glass	0.00350	Carbon black	1333-86-4	58.5	0.00340	0.00581
				Glass Fiber	65997-17-3	40	0.00233	
				Polyphenylene	26125-40-6	0.5	0.00003	
18	Shunt	Copper Alloy	32.6550	Copper	7440-50-8	99.95	54.21294	63.54085
				Oxygen	7782-44-7	0.05	0.02712	
		Resistance Material	5.5910	Copper	7440-50-8	86	7.98654	
				Manganese	7439-96-5	12	1.11440	
				Nickel	7440-02-0	2	0.18573	
		Plating	0.0050	Nickel	7440-02-0	100	0.00831	

19	Top housing	Resin	3.6300	Polyphenylene Sulfide	26125-40-6	59.5	3.58752	10.13378
			2.4400	Glass fiber	65997-17-3	40	0.14712	
			0.0310	Carbon Black	1333-86-4	0.5	0.00026	
20	Bottom housing	Resin	3.154	Polyphenylene Sulfide	26125-40-6	59.5	3.11709	8.80498
			2.120	Glass fiber	65997-17-3	40	0.16523	
			0.027	Carbon Black	1333-86-4	0.5	0.02619	
21	Conformal coating	Coating Silica	0.700	Dichlorodimethyl	68611-44-9	97	1.12782	1.16270
				Aminopropyltriethoxysilane	919-30-2	3	0.03488	
22	Adhesive	Silicone	0.800	Limestone	1317-65-3	90	1.19592	1.32880
				Trimethoxyvinylsilane	2768-02-7	5	0.06644	
				3-(Trimethoxysilyl) propylamine	13822-56-5	4	0.05315	
				Quartz (SiO2)	14808-60-7	1	0.01329	
23	PCB	Copper Alloy	5.450	Copper	7440-50-8	100	9.05247	9.05901
		Conformal Coating	0.00015	Epoxy Resin	26265-08	45	0.00011	
			0.00350	Glass Fiber	65997-17	45	0.00262	
			0.00029	Silicon dioxide	7631-86-9	10	0.00005	
		Total Weight	**60.20**					

This Document was updated on: 1/30/2023

Important remarks:

1. It is the responsibility of the user to verify they are accessing the latest version.