


# MATERIAL DECLARATION SHEET



Material number	54-L			
Product Line	Sensors & Controls			
Compliance Date	10/16/2024			
RoHS Compliant	Yes	MSL	N/A	

No.	Construction Element (subpart)	Homogeneous Material	Material weight [g]	Homogeneous Material/	CASRN	Materials Mass %	Material Mass % of total unit wt.	Subpart mass of total wt. (%)
				Substances	if applicable			
1	Substrate	Alumina Ceramic	0.277	Aluminum oxide	1344-28-1	96.00	1.902	1.98
				Silicon Dioxide	7631-86-9	2.00	0.040	
				Magnesium Oxide	1309-48-4	1.00	0.020	
				Calcium Oxide	1305-78-8	1.00	0.020	
2	Rotor	GS-51 Nylatron	1.13398	Nylon 6.6 (polyhexamethylene adipamide)	32131-17-2	66	5.354	8.11
				Glass Fiber	65997-17-3	32	2.596	
				Molybdenum Disulfide	1317-33-5	2	0.162	
3	Retaining Ring	Stainless Steel 301	0.01	Carbon	7440-44-0	0.15	0.00011	0.071539
				Manganese	7439-96-5	2.00	0.00143	
				Phosphorus	7723-14-0	0.05	0.00003	
				Sulfur	7704-34-9	0.03	0.00002	
				Silicon	7440-21-3	1.00	0.00072	
				Chromium	7440-47-3	17.00	0.01216	
				Nickel	7440-02-0	7.00	0.00501	
Iron	7439-89-6	72.78	0.05206					
4	O-Ring, switch module	Nitrile	0.022	Nitrile rubber	9003-18-3	100.00	0.16	0.157387

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5	O-Ring, shaft	Nitrile	0.003	Nitrile rubber	9003-18-3	100.00	0.02	0.021462
6	Terminal Pin	Phosphor Bronze CDA 510	0.12	Lead	7439-92-1	0.050	0.00	0.858474
				Zinc	7440-66-6	0.300	0.00258	
				Iron	7439-89-6	0.100	0.00086	
				Tin	7440-31-5	5.800	0.04979	
				Phosphorus	7723-14-0	0.350	0.00300	
		Plating	0.017	Tin	7440-31-5	100.00	0.12	0.121617
7	Contact Spring - Strip x2	Wire Nickel/Silver C770	0.029	Copper	7440-50-8	59.00	0.12	0.00002
				Nickel	7440-02-0	12.00	0.02	
				Zinc	7440-66-6	29.00	0.06	
8	Resistive Ink 1	Ink CP-44:102	0.00209	Phenolic resin	9039-25-2	67.00	0.0100	0.014952
				DAIP Resin	1087-21-4	6.00	0.0009	
				Carbon Black	1333-86-4	7.00	0.0010	
				BaSO4	7727-43-7	16.00	0.0024	
9	Resistive Ink 2	Ink CP-44:101	0.00171	Graphite	7782-42-5	4.00	0.0006	0.012233
				Phenolic resin	9039-25-2	67.00	0.00820	
				DAIP Resin	1087-21-4	6.00	0.00073	
				Carbon Black	1333-86-4	7.00	0.00086	
				BaSO4	7727-43-7	16.00	0.00196	
10	Slider	Nylon	1.36078	Nylon 6.6 (polyhexamethylene adipamide)	32131-17-2	77.50	7.545	9.734951
				Glass spheres	65997-17-3	20.00	1.9470	
				Carbon Black	1333-86-4	2.50	0.2434	
11	Contact, Switch x2	Nickel Silver C770	0.129	Copper	7440-50-8	59.00	0.5445	0.922859
				Nickel	7440-02-0	12.00	0.1107	
				Zinc	7440-66-6	29.00	0.2676	
12	Bracket	Stainless Steel 301	0.741	Carbon	7440-44-0	0.15	0.0080	5.301076
				Manganese	7439-96-5	2.00	0.1060	
				Phosphorus	7723-14-0	0.05	0.0024	

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				Sulfur	7704-34-9	0.03	0.0016	
				Silicon	7440-21-3	1.00	0.0530	
				Chromium	7440-47-3	17.00	0.9012	
				Nickel	7440-02-0	7.00	0.3711	
				Iron	7439-89-6	72.78	3.8579	
13	Lube, element	NYE 799	0.005	Decanoic acid, mixed esters with heptanoic acid, octanoic acid, trimethylolpropane	68130-53-0	54.40	0.02	0.04
				Lithium 12-hydroxystearate	7620-77-1	5.70	0.002	
				Isohexadecyl- isooctadecanoate	52006-45-8	33.70	0.01	
				Polyisobutylene	9003-27-4	6.20	0.002	
14	Lube, shaft	NYE-774F	0.002	1-Decene, tetramer, mixed with 1-decene trimer, hydrogenated	68649-12-7	58.80	0.01	0.01
				1-Propene, polymer with ethene	9010-79-1	30.80	0.004	
				Silica, amorphous fumed	112945-52-5	5.40	0.0008	
				Ethene, tetrafluoro-, homopolymer	9002-84-0	5.00	0.0007	
15	Bushing	Stainless Steel 303	1.765	Carbon	7440-44-0	0.15	0.02	12.63
				Manganese	7439-96-5	2	0.25	
				Phosphorus	7723-14-0	0.2	0.03	
				Sulfur	7704-34-9	0.15	0.02	
				Silicon	7440-21-3	0.9	0.11	
				Chromium	7440-47-3	18	2.27	
				Nickel	7440-02-0	9	1.14	
				Iron	7439-89-6	69	8.71	
Molybdenum	7439-98-7	0.6	0.08					
16	Shaft	Stainless Steel 303	3.322	Carbon	7440-44-0	0.15	0.04	23.77
				Manganese	7439-96-5	2	0.48	
				Phosphorus	7723-14-0	0.2	0.05	

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				Sulfur	7704-34-9	0.15	0.04	
				Silicon	7440-21-3	0.9	0.21	
				Chromium	7440-47-3	18	4.28	
				Nickel	7440-02-0	9	2.14	
				Iron	7439-89-6	69	16.40	
				Molybdenum	7439-98-7	0.6	0.14	
17	Cover	Shinkong Compound	0.44225	PBT	30965-26-5	49	1.55	3.16
				Glass Fiber	65997-17-3	35	1.11	
				Brominated Epoxy Resin	68928-70-1	10	0.32	
				Antimony Trioxide	1309-64-4	6	0.19	
18	Hex Nut	Brass C360	0.0079	Copper	7440-50-8	61.5	0.03	0.057
				Zinc	7440-66-6	35.4	0.02	
		Lead	7439-92-1	3.1	0.002			
		Plating	0.0001	Nickel	7440-02-0	100	0.001	0.001
19	Lockwasher	Stainless Steel 304	0.0490	Carbon	7440-44-0	0.18	0.0006	0.351
				Manganese	7439-96-5	2	0.0070	
				Phosphorus	7723-14-0	0.045	0.0002	
				Sulfur	7704-34-9	0.03	0.0001	
				Silicon	7440-21-3	0.75	0.0026	
				Chromium	7440-47-3	17	0.0596	
				Nickel	7440-02-0	8	0.0280	
		Iron	7439-89-6	71.995	0.2524			
		Plating	0.0010	Nickel	7440-02-0	100	0.01	0.007
20	Epoxy	BPFRC	0.0520	Epoxy resin	25085-99-8	49	0.18	0.372
				Antimony trioxide	1309-64-4	11	0.04	
				Quartz, (SiO <sub>2</sub> )	14808-60-7	11	0.04	
				Aluminum Oxide	1344-28-1	11	0.04	
				Kaolin Clay	1332-58-7	9	0.033	
				Magnesium aluminum silicate	1327-43-1	9	0.033	
21	Termination Ink	9703G	0.0375	Silver	7440-22-4	93.1	0.250	0.268
				Palladium	7440-05-3	3.1	0.008	

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				Copper Oxide	1317-39-1	1.2	0.003	
				Glass, oxide, chemicals	65997-17-3	2	0.005	
				Barium	7440-39-3	0.3	0.001	
				Boron	7440-42-8	0.3	0.001	
22	Body	Shinkong Compound	1.905	PBT	30965-26-5	49	6.678	13.628
				Glass Fiber	65997-17-3	35	4.770	
				Brominated Epoxy Resin	68928-70-1	10	1.363	
				Antimony Trioxide	1309-64-4	6	0.818	
				PBT	30965-26-5	49	3.576	
23	Switch Housing	Shinkong Compound	1.02	Glass Fiber	65997-17-3	35	2.554	7.297
				Brominated Epoxy Resin	68928-70-1	10	0.730	
				Antimony Trioxide	1309-64-4	6	0.438	
24	Cover, Detent	Shinkong Compound	1.020583	PBT	30965-26-5	49	3.578	7.301
				Glass Fiber	65997-17-3	35	2.555	
				Brominated Epoxy Resin	68928-70-1	10	0.730	
				Antimony Trioxide	1309-64-4	6	0.438	
25	Insulator	Nylon	0.241	Polyamide 9T	169284-22-4	45	3.286	1.724
				Glass Fiber	65997-17-3	33	2.409	
				Brominated polystyrene	88497-56-7	22	1.606	
		Underplating	0.0007	Nickel	7440-02-0	100	0.005	0.005
		Over Plating	0.001	Silver	7440-22-4	100	0.007	0.007
		Over Plating	0.0007	Tin	7440-31-5	100	0.005	0.005
		Phosphor Bronze C52100	0.257	Lead	7439-92-1	0.05	0.001	1.839
				Tin	7440-31-5	9	0.165	
				Zinc	7440-66-6	0.2	0.004	
				Iron	7439-89-6	0.1	0.002	
Phosphorus	7723-14-0			0.35	0.006			
Copper	7440-50-8	90.3	1.660					
26	Lube, Contact Switch	Lube	0.002	o-Phenylenediamine	95-54-5	0.0	0.000001	0.014
				Non-hazardous grease	Trade secret	100.0	0.014	
<b>Total Weight</b>			<b>13.98</b>					

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**This Document was updated on: 10/16/2024**

**Important remarks:**

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