


MATERIAL DECLARATION SHEET



Material number	96-L Cermet (Single Cup)			
Product Line	Sensors & Controls			
Compliance Date	10/14/2024			
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	Spring Washer	Copper Beryllium Alloy CA172	0.031	Beryllium	7440-41-7	1.90	0.005	0.26
				Nickel	7440-02-0	0.3	0.001	
				Cobalt	7440-48-4	0.30	0.001	
				Iron	7439-89-6	0.30	0.001	
				Aluminum	7429-90-5	0.10	0.0003	
				Silicon	7440-21-3	0.10	0.0003	
				Copper	7440-50-8	96.70	0.252	
				Silver	7440-22-4	0.05	0.0001	
				Misc., not to declare	Trade Secret	0.25	0.001	
2	Substrate	Alumina Ceramic	0.3	Aluminum oxide	1344-28-1	96.00	2.423	2.52
				Silicon Dioxide	7631-86-9	2.00	0.050	
				Magnesium Oxide	1309-48-4	1.00	0.025	
				Calcium Oxide	1305-78-8	1.00	0.025	
3	Rotor	Shinkong Compound	5.24	PBT	30965-26-5	49	21.599	44.08
				Glass Fiber	65997-17-3	35	15.428	
				Brominated Epoxy Resin	68928-70-1	10	4.408	
				Antimony Trioxide	1309-64-4	6	2.645	
4	Washer 1	Stainless Steel 301	0.035	Carbon	7440-44-0	0.15	0.00044	0.294419

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				Manganese	7439-96-5	2.00	0.00589	
				Phosphorus	7723-14-0	0.05	0.00013	
				Sulfur	7704-34-9	0.03	0.00009	
				Silicon	7440-21-3	1.00	0.00294	
				Chromium	7440-47-3	17.00	0.05005	
				Nickel	7440-02-0	7.00	0.02061	
				Iron	7439-89-6	72.78	0.21426	
5	O-Ring	Nitrile	0.009	Nitrile rubber	9003-18-3	100.00	0.08	0.075708
6	Terminal Wire x3	Copper Alloy C102	0.421	Copper	7440-50-8	99.999	3.54	3.541446
		Plating	0.017	Oxygen	7782-44-7	0.001	0.00004	
7	Contact Spring	Wire Nickel/Silver C770	0.0243	Tin	7440-31-5	100.00	0.14	0.143004
				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			
		Laminated Back Up Strip Brass C260	0.05	Copper	7440-50-8	70.00	0.29	0.00004
				Zinc	7440-66-6	30.00	0.13	
		Spacer Strip Nickel/Silver C770	0.0064	Copper	7440-50-8	59.00	0.0318	0.05384
				Nickel	7440-02-0	12.00	0.0065	
				Zinc	7440-66-6	29.00	0.0156	
		Solder Inlay	0.0015	Tin	7440-31-5	95.00	0.01	0.01262
Silver	7440-22-4			5.00	0.001			
8	Resistive Ink 1	DP 4321	0.00216	Ruthenium oxide	12036-10-1	12.10	0.0022	0.018170
				Silver	7440-22-4	10.10	0.0018	
				Palladium	7440-05-3	12.10	0.0022	
				Lead glass	7439-92-1	36.30	0.0066	
				Aluminum oxide	1344-28-1	3.10	0.0006	
				Calcium oxide	1305-78-8	1.10	0.0002	
				Bismuth trioxide	1304-76-3	11.10	0.0020	
				Digadolinium trioxide	12064-62-9	14.10	0.0026	
9	Resistive Ink 2	DP 4331	0.01584	Ruthenium oxide	12036-10-1	15.00	0.01999	0.133246

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				Silver	7440-22-4	5.00	0.00666	
				Palladium	7440-05-3	5.00	0.00666	
				Lead glass	7439-92-1	43.00	0.05730	
				Aluminum oxide	1344-28-1	5.00	0.00666	
				Bismuth trioxide	1304-76-3	13.00	0.01732	
				Digadolinium trioxide	12064-62-9	14.00	0.01865	
10	Conductor Ink	Dupont 6277	0.0005	Silver	7440-22-4	74.50	0.003	0.004206
				Palladium	7440-05-3	12.70	0.0005	
				Bismuth Trioxide	1304-76-3	9.20	0.0004	
				Ruthenium Dioxide	12036-10-1	1.20	0.00005	
				Lead Glass	9439-92-1	1.8	0.0001	
				Nickel Oxide	1313-99-1	0.6	0.00003	
11	Washer 2	PTFE	0.007	Polytetrafluoroathylene	9002-84-0	15.00	0.0088	0.058884
				1-Dichloro-1-Fluoroathane	1717-00-6	85.00	0.0501	
12	Washer 3	PTFE	0.0036	Polytetrafluoroathylene	9002-84-0	15.00	0.0045	0.030283
				1-Dichloro-1-Fluoroathane	1717-00-6	85.00	0.0257	
13	Lube	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	0.003	
14	Lube	Versilube G321	0.0015	Siloxanes and Silicones, di-Me, di-Ph	68083-14-7	68.90	0.01	0.01
				Lithium stearate	4485-12-5	25.40	0.003	
				Silane, dichlorodimethyl- reaction products with silica	68611-44-9	4.80	0.0006	
				Diphenylamine	122-39-4	0.90	0.0001	
15	Bushing	Aluminum 2011	1.2	Aluminum	7429-90-5	94.50	9.54	10.09
				Copper	7440-50-8	5.50	0.56	
16	Body	Shinkong Compound	2.25	PBT	30965-26-5	49	9.27	18.93

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				Glass Fiber	65997-17-3	35	6.62		
				Brominated Epoxy Resin	68928-70-1	10	1.89		
				Antimony Trioxide	1309-64-4	6	1.14		
17	Cover	Shinkong Compound	2.2	PBT	30965-26-5	49	9.07	18.51	
				Glass Fiber	65997-17-3	35	6.48		
				Brominated Epoxy Resin	68928-70-1	10	1.85		
				Antimony Trioxide	1309-64-4	6	1.11		
18	Hex Nut	Brass C360	0.0079	Copper	7440-50-8	61.5	0.04		0.066
				Zinc	7440-66-6	35.4	0.02		
				Lead	7439-92-2	3.1	0.00		
		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	0.0007	0.412	
				Manganese	7439-96-5	2	0.0082		
				Phosphorus	7723-14-0	0.045	0.0002		
				Sulfur	7704-34-9	0.03	0.0001		
				Silicon	7440-21-3	0.75	0.0031		
				Chromium	7440-47-3	17	0.0701		
				Nickel	7440-02-0	8	0.0330		
		Plating	0.0010	Iron	7439-89-6	71.995	0.2968	0.008	
				Nickel	7440-02-0	100	0.01		
20	Cover and Terminals Epoxy	BPFRC	0.0055	Epoxy resin	25085-99-8	49	0.02	0.046	
				Antimony trioxide	1309-64-4	11	0.01		
				Quartz, (SiO ₂)	14808-60-7	11	0.01		
				Aluminum Oxide	1344-28-1	11	0.01		
				Kaolin Clay	1332-58-7	9	0.00		
				Magnesium aluminum silicate	1327-43-1	9	0.00		
21	Hole Epoxy	BP8	0.0035	Epoxy Resin	25085-99-8	51	0.02	0.029	
				Quartz, (SiO ₂)	14808-60-7	34	0.01		
				Kaolin Clay	1332-58-7	15	0.00		
			Total Weight	11.89					

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This Document was updated on: 10/15/2024

Important remarks:

1. It is the responsibility of the user to verify they are accessing the latest version.
2. Per [Product Update Memo SC2436](#), this MDS is under revision. The updated version will be posted soon.