


MATERIAL DECLARATION SHEET



Material Number	3751H-L			
Product Line	Precisions			
Compliance Date	December 31, 2005			
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	Mandrel Wire	Copper	1.5	Copper	7440-50-8	100	17.119	17.119
		Coating	0.00012	Polyamide		100	0.001	0.001
2	Resist Wire	Nickel Copper	0.7317	Nickel	7440-02-0	47	3.925	8.351
				Copper	7440-50-8	46.5	3.883	
				Iron	7439-89-6	3	0.251	
				Manganese	7439-96-5	3	0.251	
				Cobalt	7440-48-4	0.5	0.042	
3	Varnish	Polyester	0.1093	Phenolic Resin		100	1.247	1.247
4	Resistive Ink	Ink	0.008	Phenolic Resin		67	0.061	0.091
				DAIP resin	1087-21-4	6	0.005	
				Carbon Black	1333-86-4	7	0.006	
				Barium sulfate	7727-43-7	16	0.015	
				Graphite	7782-42-5	4	0.004	
5	Housing	DAP Compound	1.75	Antimony Trioxide	1309-64-4	5	0.999	19.972
				Aluminum Hydroxide	21645-51-2	20	3.994	
				Diallyl Phthalate Polymer	25053-15-0	25	4.993	
				Glass Fiber	65997-17-3	50	9.986	

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6	Tab X2	Nickel	0.002	Nickel	7440-02-0	100	0.023	0.023	
		Inlay	0.1922	Silver	744-22-4	56	1.228		2.193
				Copper	7440-50-8	22	0.483		
				Zinc	7440-66-6	17	0.373		
				Tin	7440-31-5	5	0.110		
7	Terminal Cap X2	Nickel	0.00105	Nickel	7440-02-0	100	0.012	0.012	
		Plating	0.0010	Gold	7440-57-5	100	0.011	0.011	
8	TR Terminal X2	Brass	0.157	Copper	7440-50-8	61.5	1.102	1.792	
				Lead	7439-92-1	3	0.054		
				Zinc	7440-66-6	35.5	0.636		
		Plating	0.00105	Gold	7440-57-5	100	0.012	0.012	
9	Ball Bearing (Lid)	Stainless Steel	0.13	Carbon	7440-44-0	1.2	0.018	1.484	
				Silicon	7440-21-3	1	0.015		
				Manganese	7439-96-5	1	0.0148		
				Phosphorus	7723-14-0	0.04	0.001		
				Sulfur	7704-39-9	0.03	0.0004		
				Chromium (2)	7440-47-3	18	0.267		
				Nickel	7740-02-0	0.6	0.009		
				Molybdenum	7439-98-7	0.75	0.011		
				Iron	7439-89-6	77.38	1.148		
10	Cover	DAP Compound	0.8	Antimony Trioxide	1309-64-4	5	0.457	9.130	
				Aluminum Hydroxide	21645-51-2	20	1.826		
				Diallyl Phthalate Polymer	25053-15-0	25	2.283		
				Glass Fiber	65997-17-3	50	4.565		
11	Wiper Terminal	Brass	0.031	Copper	7440-50-8	61.5	0.218	0.354	
				Lead	7439-92-1	3	0.0106		
				Zinc	7440-66-6	35.5	0.126		
		Plating	0.00003	Gold	7440-57-5	100	0.0003	0.0003	

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12	Ball Bearing (Cover)	Stainless Steel	0.07	Carbon	7440-44-0	1.2	0.010	0.799
				Silicon	7440-21-3	1	0.008	
				Manganese	7439-96-5	1	0.0080	
				Phosphorus	7723-14-0	0.04	0.0003	
				Sulfur	7704-39-9	0.03	0.0002	
				Chromium (2)	7440-47-3	18	0.144	
				Nickel	7740-02-0	0.6	0.005	
				Molybdenum	7439-98-7	0.75	0.006	
				Iron	7439-89-6	77.38	0.618	
13	Lid	Aluminum	1.2	Silicon	7440-21-3	0.7	0.096	13.695
				Iron	7439-89-6	0.34	0.047	
				Copper	7440-50-8	0.34	0.047	
				Manganese	7439-96-3	0.09	0.012	
				Magnesium	7439-98-5	0.9	0.123	
				Chromium (2)	7440-47-3	0.09	0.012	
				Zinc	7440-66-6	0.05	0.007	
				Titanium	7440-32-6	0.02	0.0027	
				Aluminum	7429-90-5	97.47	13.349	
14	Pin 1	Stainless Steel	0.0263	Carbon	7440-44-0	0.15	0.0005	0.300
				Manganese	7439-96-5	2	0.006	
				Silicon	7740-21-3	1	0.003	
				Chromium (2)	7740-47-3	18	0.054	
				Nickel	7440-02-0	9	0.0270	
				Iron	7439-89-6	69.7	0.209	
				Sulfur	7446-09-5	0.15	0.0005	
15	Rotor Shaft	DAP Compound	0.55	Antimony Trioxide	1309-64-4	5	0.314	6.277
				Aluminum Hydroxide	21645-51-2	20	1.255	
				Diallyl Phthalate Polymer	25053-15-0	25	1.569	
				Glass Fiber	65997-17-3	50	3.138	

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16	Shaft	Stainless Steel	1.1937	Carbon	7440-44-0	0.15	0.020	13.623
				Manganese	7439-96-5	2	0.272	
				Silicon	7740-21-3	1	0.136	
				Chromium (2)	7740-47-3	19	2.588	
				Nickel	7440-02-0	10	1.362	
				Iron	7439-89-6	67.7	9.223	
				Sulfur	7446-09-5	0.15	0.020	
17	Collector Bar	Copper	0.0125	Copper	7440-50-8	97.8	0.140	0.143
				Cobalt	7440-48-4	0.2	0.0003	
				Beryllium	7440-41-7	2	0.0029	
		Plating	0.00001	Gold	7440-57-5	100	0.00011	0.0001
18	Pin 2	Stainless Steel	0.001	Carbon	7440-44-0	15	0.0017	0.011
				Manganese	7439-96-5	2	0.0002	
				Silicon	7740-21-3	1	0.0001	
				Chromium (2)	7740-47-3	19	0.0022	
				Nickel	7440-02-0	10	0.001	
				Iron	7439-89-6	52.85	0.00603	
				Sulfur	7446-09-5	0.15	0.00002	
19	Slider	Nylon	0.175	Polyamide	32131-17-2	89	1.778	1.997
				Proprietary Ingredients		11	0.220	
20	Spring Wiper	Palmet	0.0105	Copper	7440-50-8	10	0.012	0.120
				Gold	7440-57-5	10	0.01198	
				Palladium	7440-05-3	30	0.036	
				Platinum	7440-06-4	10	0.012	
				Silver	7440-22-4	30	0.036	
				Zinc	7440-66-6	10	0.012	

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21	Washer 1	Stainless Steel	0.0088	Iron	7439-89-6	67.85	0.068	0.100
				Chromium (2)	7440-47-3	19	0.019	
				Manganese	7439-96-3	2	0.002	
				Nickel	7440-02-0	10	0.010	
				Silicon	7440-21-3	1	0.001	
				Carbon	7440-44-0	0.15	0.0002	
22	Washer 2	Stainless Steel	0.015	Iron	7439-89-6	67.85	0.116	0.171
				Chromium (2)	7440-47-3	19	0.033	
				Manganese	7439-96-3	2	0.003	
				Nickel	7440-02-0	10	0.0171	
				Silicon	7440-21-3	1	0.002	
				Carbon	7440-44-0	0.15	0.0003	
23	Lube (Element)	Grease	0.005	Decanoic acid, mixed esters with heptanoic acid, octanoic acid	68130-53-0	54.4	0.031	0.057
				Lithium 12-hydroxystearate	7620-77-1	5.7	0.003	
				Isohexadecyl- isooctadecanoate	52006-45-8	33.7	0.019	
				Polyisobutylene	9003-27-4	6.2	0.0035	
24	Epoxy (Collector Bar)	Epoxy	0.045	resin(epoxy resin and cresyl glycidyl ether)		46	0.236	0.514
				pigment(Phthalocyanine in Bisphenol A and TiO ₂)		4	0.021	
				fillers(Antimoy Oxide + Hydrated Alumina + Magnesium Aluminum Silicate + Alumimum slicate + Silica)		50	0.257	

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25	Epoxy (seal)	Epoxy	0.035	Epoxy resin		57	0.228	0.399
				pigment(Phthalocyanine in Bisphenol A and TiO ₂)		4	0.016	
				fillers(Silica + Aluminum Silicate)		39	0.156	
		Total weight	8.762					

This Document was updated on: May 30, 2007

Important remarks:

1. It is the responsibility of the user to verify they are accessing the latest version.
2. Chromium listed is not hexavalent chromium.
3. RoHS exemptions: lead in copper alloys (6)
4. Per [Product Update Memo SC2436](#), this MDS is under revision. The updated version will be posted soon.