


MATERIAL DECLARATION SHEET



Material Number	1440-series			
Product Line	SPD			
Compliance Date	Mar 2024			
RoHS Compliant	Yes	MSL	1	

NO	Construction Element (subpart)	Homogeneous Materials	Material weight [g]	Homogeneous Material	CASRN	Materials Mass %	Material Mass % of total unit wt.	Subpart mass of total wt • (%)
				Substances				
1	Varistor	Ceramic	34.3000	Zinc oxide	1314-13-2	99.000%	24.232%	24.477%
				Bismuth oxide	1304-76-3	0.200%	0.049%	
				Cobalt oxide	1308-04-9	0.200%	0.049%	
				Antimony oxide	1332-81-6	0.200%	0.049%	
				Manganese oxide	1317-34-6	0.100%	0.024%	
				Titanium oxide	13463-67-7	0.050%	0.012%	
				Boron oxide	1303-86-2	0.100%	0.024%	
				Chromium Oxide	1118-57-3	0.100%	0.024%	
				Silver nitrate	7761-88-8	0.050%	0.012%	
				Termination	1.1100	Silver	7440-22-4	
	Encapsulating material	2.2000	Glycidyl terminated bisphenol A epoxy chloropropane copolymer	25036-25-3	45.700%	0.717%	1.570%	
Silica			60676-86-0	31.200%	0.490%			
Titanium dioxide			13463-67-7	2.800%	0.044%			
Trimellitic anhydride			552-30-7	3.300%	0.052%			

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				Basic copper carbonate	12069-69-1	3.500%	0.055%	5.133%		
				Zirconium silicate	10101-52-7	7.000%	0.110%			
				Misc not to declare	---	6.500%	0.102%			
				Terminal	7.1928	Copper	7440-50-8		99.970%	5.131%
						Traces not to declare	---		0.030%	0.002%
				Nickel plate	0.0036	Nickel	7440-02-0		100.000%	0.003%
		Silver plate	0.0036	Silver	7440-22-4	100.000%	0.003%	0.003%		
2	Plastic shell	PBT	57.8000	PBT resin	26062-94-2	55.000%	22.686%	41.247%		
				Halogen flame retardant	68928-70-1	13.000%	5.362%			
				Antimony oxide	1309-64-4	5.000%	2.062%			
				Glass fiber	65997-17-3	20.000%	8.249%			
				Misc not to declare	---	7.000%	2.887%			
3	Spring	Spring	0.3000	Iron	7439-89-6	98.000%	0.210%	0.214%		
				Manganese	7439-96-5	0.650%	0.001%			
				Carbon	7440-44-0	0.650%	0.001%			
				Silicon	7440-21-3	0.200%	0.000%			
				Misc not to declare	---	0.500%	0.001%			
4	Switch	PPA	1.4000	Modified hexanediamide terephthalate	25776-72-1	65.000%	0.649%	0.999%		
				Glass fiber	65997-17-3	32.000%	0.320%			
				Processing aids	1333-86-4	3.000%	0.030%			
		SUS304	0.1000	Iron	7439-89-6	70.000%	0.050%	0.071%		
				Nickel	7440-02-0	10.000%	0.007%			
				Chromium	7440-47-3	18.000%	0.013%			
				Manganese	7439-96-5	2.000%	0.001%			
		SUS301	0.1000	Iron	7439-89-6	72.000%	0.051%	0.071%		
				Nickel	7440-02-0	8.000%	0.006%			

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				Chromium	7440-47-3	18.000%	0.013%	
				Manganese	7439-96-5	2.000%	0.001%	
		Copper part	0.0200	Copper	7440-50-8	61.500%	0.009%	0.014%
				Zinc	7440-66-6	38.465%	0.005%	
				Phosphorus	7723-14-0	0.006%	0.000%	
				Lead	7439-92-1	0.005%	0.000%	
				Iron	7439-89-6	0.020%	0.000%	
				Misc not to declare	---	0.005%	0.000%	
5	Copper Electrode	Copper part	21.0000	Copper	7440-50-8	91.550%	13.720%	14.986%
				Tin	7440-31-5	8.000%	1.199%	
				Zinc	7440-66-6	0.300%	0.045%	
				Phosphorus	7723-14-0	0.150%	0.022%	
6	Low-temperature alloys	Alloys Solder	1.0000	Tin	7440-31-5	42.000%	0.300%	0.714%
				Bismuth	7440-69-9	58.000%	0.414%	
7	Screw	SUS304 Part	13.6000	Carbon	7440-44-0	0.070%	0.007%	9.705%
				Manganese	7439-96-5	1.200%	0.116%	
				Silicon	7440-21-3	0.700%	0.068%	
				Phosphorus	7723-14-0	0.020%	0.002%	
				Sulfur	7704-34-9	0.010%	0.001%	
				Nickel	7440-02-0	11.000%	1.068%	
				Chromium	7440-47-3	18.000%	1.747%	
				Iron	7439-89-6	69.000%	6.697%	
		Total	140.1300					

This Document was updated on: **Mar 2024**

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Important remarks:

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