


# MATERIAL DECLARATION SHEET



Material Number	<b>S &amp; SL</b>			
Product Line	<b>Fixed Resistor</b>			
Compliance Date	<b>10/10/2024</b>			
RoHS Compliant		MSL	<b>1</b>	

Reference P/N: S5-1RF1 (Under 12 Ohm)

No.	Construction Element (Subpart)	Homogeneous Material	Material Weight (g)	Homogeneous Material Substance	CASRN	Material Mass %	Material Mass % of total unit wt.	Subpart mass of total wt. (%)
1	Ceramic Core	Ceramic	0.8200	Silicon Dioxide (SiO <sub>2</sub> )	7631-86-9	14.5000%	4.4300%	30.5514%
				Magnesium (Mg)	7439-95-4	1.1300%	0.3452%	
				Aluminum (Al)	7429-90-5	83.3200%	25.4554%	
				Barium (Ba)	7440-39-3	1.0500%	0.3208%	
2	Ceramic Cap	Iron	0.2600	Iron (Fe)	7439-89-6	99.9000%	9.6773%	9.6870%
				Tin (Sn)	7440-31-5	0.1000%	0.0097%	
3	Terminal	Copper C10100	0.1075	Copper (Cu)	7440-50-8	99.9954%	4.0050%	4.0052%
		Tin Plating	0.0025	Trace not to declare		0.0046%	0.0002%	
4	Resistive Element	Cuprothal	0.0799	Nickel (Ni)	7440-02-0	44.0000%	1.3098%	2.9769%
				Iron (Fe)	7439-89-6	0.5000%	0.0149%	
				Manganese (Mn)	7439-96-5	1.0000%	0.0298%	
				Copper (Cu)	7440-50-8	54.5000%	1.6224%	
5	Silicon coat	Silicon	0.3028	Silica, amorphous	112926-00-8	31.2000%	3.5199%	11.2817%
				Silica, crystalline - Tripoli	1317-95-9	25.0000%	2.8204%	
				Kaolin	1332-58-7	12.9000%	1.4553%	
				Carbon black	1333-86-4	0.6000%	0.0677%	
				Mica	12001-26-2	12.9000%	1.4553%	
6	Compound Mold	Epoxy Mold	1.1113	Trimethoxy(methyl)silane	1185-55-3	17.4000%	1.9630%	41.4046%
				Epoxy Resin	25068-38-6	17.0000%	7.0388%	
				Phenolic Resin	9003-35-4	8.0000%	3.3124%	
				Mineral Fillers	60676-86-0	63.0000%	26.0849%	
				Flame Retardants	Trade Secret	8.0000%	3.3124%	
				Pigments	Not to Declare	4.0000%	1.6562%	
		Total Weight	2.6840					

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Reference P/N: S5-10KF1 (Over 12 Ohm)

No.	Construction Element (Subpart)	Homogeneous Material	Material Weight (g)	Homogeneous Material Substance	CASRN	Material Mass %	Material Mass % of total unit wt.	Subpart mass of total wt. (%)
1	Ceramic Core	Ceramic	0.8200	Silicon Dioxide (SiO <sub>2</sub> )	7631-86-9	14.5000%	4.5524%	31.3960%
				Magnesium (Mg)	7439-95-4	1.1300%	0.3548%	
				Aluminum (Al)	7429-90-5	83.3200%	26.1591%	
				Barium (Ba)	7440-39-3	1.0500%	0.3297%	
2	Ceramic Cap	Iron	0.2600	Iron (Fe)	7439-89-6	99.9000%	9.9449%	9.9548%
				Tin (Sn)	7440-31-5	0.1000%	0.0100%	
3	Terminal	Copper C10100	0.1075	Copper (Cu)	7440-50-8	99.9954%	4.1157%	4.1159%
				Trace not to declare		0.0046%	0.0002%	
		Tin Plating	0.0025	Tin (Sn)	7440-31-5	100.0000%	0.0957%	0.0957%
4	Resistive Element	EVNOM Alloy	0.0077	Nickel (Ni)	7440-02-0	74.4000%	0.2193%	0.2948%
				Chromium (Cr)	7440-47-3	20.0000%	0.0590%	
				Aluminum (Al)	7429-90-5	3.5000%	0.0103%	
				Silicon (Si)	7440-21-3	1.0000%	0.0029%	
				Iron (Fe)	7439-89-6	0.5000%	0.0015%	
				Manganese (Mn)	7439-96-5	0.5000%	0.0015%	
				Copper (Cu)	7440-50-8	0.1000%	0.0003%	
5	Silicon coat	Silicon	0.3028	Silica, amorphous	112926-00-8	31.2000%	3.6172%	11.5935%
				Silica, crystalline - Tripoli	1317-95-9	25.0000%	2.8984%	
				Kaolin	1332-58-7	12.9000%	1.4956%	
				Carbon black	1333-86-4	0.6000%	0.0696%	
				Mica	12001-26-2	12.9000%	1.4956%	
				Trimethoxy(methyl)silane	1185-55-3	17.4000%	2.0173%	
6	Compound Mold	Epoxy Mold	1.1113	Epoxy Resin	25068-38-6	17.0000%	7.2334%	42.5492%
				Phenolic Resin	9003-35-4	8.0000%	3.4039%	
				Mineral Fillers	60676-86-0	63.0000%	26.8060%	
				Flame Retardants	Trade Secret	8.0000%	3.4039%	
				Pigments	Not to Declare	4.0000%	1.7020%	
		Total Weight	2.6118					

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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.
2. Resistive material weight will be different based on the resistance value.
3. The weight of the core and coating material will differ based on the size.