

Model 89 material declaration. BI Technologies Corporation

10/3/2013

LF and non-LF option content are identical after 2/1/2005

No content is banned per E.U. RoHS. Average mass of 89 trimmer is 1.2 grams each. Prepared by Eric Arnold (714) 447-2565

Weights above 1 milligram rounded to the nearest mg. Values less than 1 milligram given in scientific notation.

Sub-component	Material	% of total mass	Substance name	CAS #	Substance Weight (grams)	Special classification
Housing	PBT blend	33.0%	PBT	26062-94-2	0.303	
			Fiberglass	65997-17-3	0.081	
			SbO	1309-64-4	0.020	Fire retardant
Shaft	Brass	28.8%	Cu	7440-50-8	0.217	
			Zn	7440-66-6	0.125	
			Pb in brass	7439-92-1	0.011	Pb in copper alloy (RoHS 6c)
Slider block	PBT blend	2.1%	PBT	009002-84-0	0.019	
			Fiberglass	65997-17-3	0.006	
			PTFE	009002-84-0	0.001	
Contact	Cu alloy wire	0.13%	Cu	7440-50-8	8.43E-04	
			Zn	7440-66-6	4.14E-04	
			Ni	7440-02-0	2.76E-04	
	Nickel alloy bar	0.08%	Cu	7440-50-8	5.00E-07	
			Ni	7440-02-0	8.46E-04	
			C	7440-44-0	6.00E-07	
			Mn	7439-96-5	2.50E-06	
			Fe	7439-89-6	1.50E-04	
			S	7704-34-9	5.00E-07	
			Si	7440-21-3	5.00E-08	
Terminals	Cu wire	4.9%	Cu	7440-50-8	0.060	
	Sn plating	0.002%	Sn	7440-31-5	1.73E-05	
Potting	Epoxy	11.0%	SiO2, amorphous	7631-86-9	0.007	
			modified aliphatic polyamine	trade secret	0.027	
			hydantoin epoxy resin	15336-82-0	0.007	
			epichlorohydrin / polyglycol epoxy resin	26142-30-3	0.007	
			epichlorohydrin/bisphenol A epoxy resin	unknown	0.081	BPA
			cycloaliphatic epoxy resin	2386-87-0	0.007	
Substrate	Alumina	19.8%	Al2O3	1344-28-1	0.233	
			SiO2, amorphous	7631-86-9	2.42E-03	
			TiO2	13463-67-7	1.21E-03	
			FeO2	1345-25-1	0.001	
			MnO2	1313-13-9	0.002	
			MgO	1309-48-4	0.001	
			CaO	1305-78-8	0.001	
Conductor	AgPd thick film	0.05%	Al2O3	1344-28-1	4.34E-06	
			SiO2, amorphous	7631-86-9	1.90E-05	
			TiO2	13463-67-7	4.34E-06	
			PbO	1317-36-8	2.59E-05	Pb in electronic ceramic (RoHS 7c-1)
			ZnO	1314-13-2	4.71E-06	
			B2O3	1303-86-2	1.60E-06	
			ZrO2	1314-23-4	3.84E-07	
			BaO	1304-28-5	4.93E-06	
			Ag	7440-22-4	5.17E-04	
			Pd	7440-05-3	5.76E-05	
Resistor	Ruthenate thick film	0.09%	Al2O3	1344-28-1	1.47E-05	
			SiO2, amorphous	7631-86-9	1.24E-04	
			TiO2	13463-67-7	1.47E-05	
			MnO2	1313-13-9	6.66E-06	
			PbO	1317-36-8	3.24E-04	Pb in electronic ceramic (RoHS 7c-1)
			ZnO	1314-13-2	3.54E-05	
			B2O3	1303-86-2	4.14E-05	
			ZrO2	1314-23-4	9.94E-06	
			BaO	1304-28-5	1.68E-05	
			Ag	7440-22-4	4.00E-05	
			Pd	7440-05-3	5.10E-05	
			Steatite	14807-96-6	2.22E-06	
			Bi2Ru2O6	unknown	5.00E-05	
Pb2Ru2O6+x	unknown	3.55E-04	Pb in electronic ceramic (RoHS 7c-1)			
RuO2	12036-10-1	2.33E-05				