


Date: 4/17/2021

Material Number: MGM13S12F512GN-V3R

Pkg Config.: PK1747

Detailed Device Composition 									
No.	Homogeneous Material	Material Weight (mg)	Material Content	CAS Number	Material Weight (%)	Material Weight (mg)	ppm of Material	Wt % of Total Unit	ppm of Total Unit
1	Die Attach Epoxy	0.52	2-Ethyl-4-methyl-1H-imidazole-1-propiononitrile	23996-25-0	0.500	0.003	5000	0.0020	20
			Acrylate monomer	Proprietary	7.500	0.039	75000	0.0296	296
			Additive	Proprietary	7.500	0.039	75000	0.0296	296
			Bismaleimide monomer	TS ref# 10049	15.000	0.077	150000	0.0592	592
			Epoxy Resin	25068-38-6	8.000	0.041	80000	0.0316	316
			Silica (Amorphous) A	60676-86-0	46.000	0.237	460000	0.1816	1816
			Silicon Dioxide	60676-86-0	15.000	0.077	150000	0.0592	592
			Substituted Silane	Proprietary	0.500	0.003	5000	0.0020	20
2	Mold Compound	68.61	Aluminum and its compounds	Proprietary	3.000	2.058	30000	1.5776	15776
			Carbon Black	1333-86-4	0.550	0.377	5500	0.2892	2892
			Epoxy Resin (Proprietary)	Proprietary	8.000	5.489	80000	4.2071	42071
			Phenol Resin (Proprietary)	Proprietary	3.450	2.367	34500	1.8143	18143
			Silica (Amorphous) A	60676-86-0	65.000	44.599	650000	34.1824	341824
			Silica (Amorphous) B	60676-86-0	20.000	13.723	200000	10.5177	105177
3	SIP Components	24.01	Detail Not Available	0000000	100.000	24.010	1000000	18.4021	184021
4	Substrate	27.88	3-methoxy-3-methylbutylacetate	103429-90-9	0.930	0.259	9300	0.1988	1988
			Barium Sulfate	7727-43-7	0.020	0.006	200	0.0043	43
			C.I pigment blue 15	147-14-8	0.060	0.017	600	0.0128	128
			Copper	7440-50-8	49.370	13.767	493700	10.5514	105514
			Dipropylene glycol monomethyl ether	34590-94-8	0.510	0.142	5100	0.1090	1090
			Glass Fabric	65997-17-3	14.230	3.968	142300	3.0412	30412
			Gold	7440-57-5	0.280	0.078	2800	0.0598	598
			Heavy Aromatic Solvent naphtha	64742-94-5	1.710	0.477	17100	0.3655	3655
			Modified Epoxy	186511-	5.670	1.581	56700	1.2118	12118

			Acrylate Resin	06-8					
			Nickel	7440-02-0	1.740	0.485	17400	0.3719	3719
			Organic yellow pigment	Proprietary	0.060	0.017	600	0.0128	128
			Palladium	7440-05-3	0.320	0.089	3200	0.0684	684
			Proprietary Resin Mixture	Proprietary	19.720	5.499	197200	4.2146	42146
			Silicon Dioxide	60676-86-0	2.940	0.820	29400	0.6283	6283
			Talc (No Asbestiform Fibers)	14807-96-9	2.440	0.680	24400	0.5215	5215
5	Bond Wire	0.22	Calcium	7440-70-2	0.002	0.000	20	0.0000	0
			Gold	7440-57-5	99.048	0.222	990480	0.1700	1700
			Palladium	7440-05-3	0.950	0.002	9500	0.0016	16
6	Solder Paste	6.22	Copper	7440-50-8	3.000	0.187	30000	0.1431	1431
			diethylene glycol monobutyl ether	112-34-5	2.000	0.124	20000	0.0954	954
			Proprietary Material	Proprietary	20.000	1.245	200000	0.9541	9541
			Silver	7440-22-4	5.000	0.311	50000	0.2385	2385
			Tin	7440-31-5	70.000	4.357	700000	3.3392	33392
7	Shielding Material	0.30	Copper	7440-50-8	100.000	0.305	1000000	0.2338	2338
8	Shielding Material	0.27	Carbon	7440-44-0	0.015	0.000	150	0.0000	0
			Chromium	7440-47-3	17.000	0.045	170000	0.0348	348
			Iron	7439-89-6	65.453	0.175	654530	0.1339	1339
			Manganese	7439--96-5	1.000	0.003	10000	0.0020	20
			Molybdenum	7439-98-7	2.500	0.007	25000	0.0051	51
			Nickel	7440-02-0	13.500	0.036	135000	0.0276	276
			Phosphorous	7723-14-0	0.017	0.000	170	0.0000	0
			Silicon	7440-21-3	0.500	0.001	5000	0.0010	10
			Sulfur	68515-96-8	0.015	0.000	150	0.0000	0
9	Die	2.43	Silicon	7440-21-3	99.800	2.425	998000	1.8587	18587
			Silicon Dioxide	60676-86-0	0.200	0.005	2000	0.0037	37
	Total Unit Weight =	130.46				130.46		100.0000	1000000