

16 Leads - TSSOP
Package Material Declaration



Date	28-Mar-19	Product name	Integrated Circuit
Package Code	GO	RoHS Compliant	Y
Package Name	Thin Plastic Shrink Small Outline 173mil	Halogen Free	Y
Product Total Mass (g)	0.05963	Plating	Pure Matte Sn
Product Number		MLX90316	

Material Declaration

Part Name	Material Name	Component Weight (g)	Material Component (Element)	CAS #	Element ratio (%)	Material Weight (g)	Ratio total Wt (ppm)
Leadframe	Ag plated Cu C7025	0.01900	Copper (Cu) (remaining)	7440-50-8	95.825	0.01821	305318
			Iron (Fe) (0.2 max)	7439-89-6	0.02	0.000004	64
			Lead (Pb) (0.005 max)	7439-92-1	0.001	0.0000002	3
			Cobalt (Co) (0.4 max)	7440-48-4	0.2	0.00004	637
			Nickel (Ni) (2.2~4.2%)	7440-02-0	2.28	0.00043	7265
			Zinc (Zn) (1.0 max)	7440-66-6	0.02	0.000004	64
			Manganese (Mn) (0.10 max)	7439-96-5	0.004	0.000001	13
			Silicon (Si) (0.25~1.2%)	7440-21-3	0.52	0.00010	1657
			Magnesium (Mg) (0.05~0.3%)	7439-95-4	0.13	0.00002	414
			Silver (Ag) (0.5~1.5%)	7440-22-4	1	0.00019	3186
Die	Silicon IC 1	0.00302	Silicon (Si)	7440-21-3	99.99	0.00302	50639
			others	-	0.01	0.0000003	5
	Silicon IC 2	0.00302	Silicon (Si)	7440-21-3	99.99	0.00302	50639
others	-		0.01	0.0000003	5		
IMC	S-FeNi-8	0.000012	Iron (Fe)	7439-89-6	19.75	0.0000024	40
			Nickel (Ni) (0.0 ~ 80%)	7440-02-0	40	0.0000048	80
			Molybdenum (Mo) (0.0 ~ 80%)	7439-98-7	40	0.0000048	80
			others (max. 0.5%)	-	0.25	0.00000003	1
Die attach material	Conductive epoxy 84-3	0.00067	Quartz (SiO2)	14808-60-7	55	0.00037	6180
			Epoxy resin	-	43.605	0.00029	4899
			Dimethyl silicone polymer with silica	67762-90-7	0.75	0.00001	84
			Diiron-trioxide	1309-37-1	0.25	0.000002	28
			Aluminum oxide	1344-28-1	0.25	0.000002	28
			Titanium-dioxide	13463-67-7	0.075	0.000001	8
			Cu-Phthalocyanin	147-14-8	0.07	0.0000005	8
		0.00067	Quartz (SiO2)	14808-60-7	55	0.00037	6180
			Epoxy resin	-	43.605	0.00029	4899
			Dimethyl silicone polymer with silica	67762-90-7	0.75	0.00001	84
			Diiron-trioxide	1309-37-1	0.25	0.000002	28
			Aluminum oxide	1344-28-1	0.25	0.000002	28
			Titanium-dioxide	13463-67-7	0.075	0.000001	8
			Cu-Phthalocyanin	147-14-8	0.07	0.0000005	8
Wire	Pd doped Gold	0.00112	Gold (Au)	7440-57-5	99	0.00111	18594
			Palladium (Pd)	7440-05-3	1	0.0000112	188
Lead Finish	Tin	0.00135	Tin (Sn)	7440-31-5	99.99	0.00135	22637
			Others	-	0.01	0.0000001	2
Encapsulation	Epoxy resin CEL9220HF13V	0.03077	Epoxy resin	Proprietary	7	0.00215	36120
			Phenol resin (2~7%)	Proprietary	5	0.00154	25800
			Silica (74~92%)	60676-86-0	80.8	0.02486	416926
			Carbon black (0.2%)	1333-86-4	0.2	0.00006	1032
			Metal Hydroxide (1~10%)	Proprietary	5	0.00154	25800
			Others (max 3%)	-	2	0.00062	10320

Total package weight (g) 0.05963

Comments

- Composition derived from MSDS and material CoC from vendors
- Component weight based on assembly of generic parts
- Reliability qualification reports are available upon request through the appropriate sales or marketing contact
- Third party testing for RoHS substances are available upon request to environment@melexis.com

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