

14 Leads - DFN 4x5
Package Material Declaration



Date	27-Nov-17	Product name	Integrated Circuit
Package Code	XE	RoHS Compliant	Y
Package Name	Open Cavity SMD-14 package	Halogen Free	Y
Product Total Mass (g)	0.20044	Plating	electroplating+Sn immersion

Product Number MLX90817

Material Declaration

Part Name	Material Name	Component Weight (g)	Material Component (Element)	CAS #	Element ratio (%)	Material Weight (g)	Ratio total Wt (ppm)
Leadframe	High Copper Alloy C194	0.01422	Copper (Remaining)	7440-50-8	97.463	0.01386	69145
			Iron (2.1 - 2.6%)	7439-89-6	2.33	0.00033	1653
			Phosphorus (0.015-0.15%)	7723-14-0	0.077	0.000011	55
			Zinc (0.05~0.20%)	7440-66-6	0.12	0.00002	85
			Lead (0.03max)	7439-92-1	0.01	0.000001	7
Plating	NiPdAu	0.00014	Nickel (Ni)	7440-02-0	86	0.00012	601
			Palladium (Pd)	7440-05-3	12	0.00002	84
			Gold (Au)	7440-57-5	2	0.000003	14
Die 1	Die silicon	0.00491	Silicon (Si)	7440-21-3	99.99	0.00491	24494
			others	-	0.01	0.0000005	2
Die 2	Die silicon	0.00055	Silicon (Si)	7440-21-3	99.99	0.00054	2719
			others	-	0.01	0.0000001	0.3
Die 2 attach material	Silicone	0.00038	Dimethyl Siloxane, Dimethylvinylsiloxy-terminated	68083-19-2	90	0.00034	1684
			Hexamethyldisilazane reaction with Silica	68909-20-6	7	0.00003	131
			Dimethyl, methylhydrogen siloxane, hydrogen-terminated	69013-23-6	3	0.00001	56
Die 1 attach material	Epoxy Adhesive	0.00043	Treated silica (5-10%)	Proprietary	8	0.00003	172
			Glycol ethers (10-30%)	Proprietary	22	0.00009	472
			Metal Oxide (15-40%)	Proprietary	31	0.00013	665
			Curing agent & hardener (5-10%)	Proprietary	8	0.00003	172
			Epoxy resin (15-40%)	Proprietary	31	0.00013	665
Wire	Gold	0.00033	Gold (Au)	7440-57-5	99	0.00032	1620
			Palladium (Pd)	7440-05-3	1	0.000003	16
Lead Finish	Alloy	0.00062	Tin (Sn)	7440-31-5	99.99	0.00062	3093
			others	7439-92-1	0.01	0.0000001	0.3
Cavity Fill	Fluoroelastomer	0.00966	Perfluoropolyether polymer	Proprietary	80	0.00773	38556
			Fluoroalkylether + additives	Proprietary	20	0.00193	9639
Epoxy Lid attach	Epoxy Adhesive	0.00336	Epoxy resin	Proprietary	28	0.00094	4694
			Silicon dioxide	Proprietary	71	0.00239	11902
			Additives	Proprietary	1	0.00003	168
Encapsulation	Epoxy resin EME-G770HCD	0.16585	Silica Fused (85-95)	60676-86-0	93.7	0.15540	775309
			Epoxy resin (1-5)	Proprietary	3	0.00498	24823
			Phenol resin (1-5)	Proprietary	3	0.00498	24823
			Carbon Black (0.1-0.5)	1333-86-4	0.3	0.00050	2482

Total package weight (g) 0.20044

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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