



Semiconductor Device Type: MF (E2X) 010 DFN 3x3mm Matte Tin

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Basic Substance	CAS Number	"Contained In" Sub-Component	% Total Weight	mg/part	ppm	(mg) Total	Mold Compound	% of Total Weight		
Silica, fused	60676-86-0	Mold Compound	72.864	17.414	728,640	Epoxy Resin (NLP # 500-033-5)	Silica, fused	60676-86-0	90.00	
Epoxy Resin (NLP # 500-033-5)	Trade Secret	Mold Compound	3.927	0.938	39,266		Trade Secret		4.85	
Phenolic Resin	Trade Secret	Mold Compound	3.927	0.938	39,266		Phenolic Resin	Trade Secret	4.85	
Carbon Black	1333-86-4	Mold Compound	0.243	0.058	2,429		Carbon Black	1333-86-4	0.30	
						Total		100.00		
Copper	7440-50-8	Lead Frame	3.544	0.847	35,444	0.89	(mg) Total		3.71	
Iron	7439-89-6	Lead Frame	0.087	0.021	872		Lead Frame	% of Total Weight		
Silver	7440-22-4	Lead Frame	0.071	0.017	707		Copper	7440-50-8		95.54
Zinc	7440-66-6	Lead Frame	0.005	0.001	46		Iron	7439-89-6		2.35
Phosphorous	7723-14-0	Lead Frame	0.003	0.001	31		Silver	7440-22-4		1.91
Silver	7440-22-4	Die Attach	0.491	0.117	4,914		Zinc	7440-66-6		0.13
Acrylate resins Proprietary	Trade Secret	Die Attach	0.113	0.027	1,134	Phosphorous	7723-14-0	0.08		
Treated silica	Trade Secret	Die Attach	0.013	0.003	126	Total			100.00	
Heterocyclic organic compound	Trade Secret	Die Attach	0.013	0.003	126	0.15	(mg) Total		0.63	
Silicon	7440-21-3	Chip (Die)	9.260	2.213	92,600		Silver	7440-22-4		78.00
Gold	7440-57-5	Wire Bond	0.820	0.196	8,200		Acrylate resins Proprietary	Trade Secret		18.00
Tin	7440-31-5	Plating on external leads (pins) - Matte Tin / annealed at 150°C for 1 hour	4.620	1.104	46,200		Treated silica	Trade Secret		2.00
TOTALS:			100.000	23.900	1,000,000		Heterocyclic organic compound	Trade Secret		2.00
0.0239 g Total Mass						Total			100.00	
This semiconductor device and its homogenous materials comply with EU Directives: 2002/95/EC (27 January 2003) & Directive 2011/65/EU (08 June 2011) and 2015/863/EU (31 March 2015) and 2002/53/EC (End-of-Life Vehicles (ELV) without exemption (zero)										
Compliance with the above EU Directives has been verified via internal design controls, supplier declarations, and /or analytical test data.										
If a chemical substance is absent from the list above, the chemical substance is NOT an intentional ingredient in the semiconductor device and, to the best of Microchip Technology Incorporated's knowledge and belief as of the date of this document, there is no credible reason to believe that the unavoidable impurity concentration of the chemical substance, if any, is not below the threshold of regulatory concern for any regulatory scheme world-wide.										
Molding compounds used by Microchip meet the UL94 V0 flammability standard for plastics. You can access the UL IQTM family of databases to obtain a test report at http://ul.com/global/eng/pages/offerings/industries/chemicals/plastics/										
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Assembled package referenced above is EU REACH compliant based on the latest SVHC candidate list of ECHA which can be found at http://echa.europa.eu/web/guest/candidate-list-table										
						2.21	Total (mg)	Chip (Die)	% of Total Weight	9.26
						Silicon		7440-21-3	100.00	
						Total				100.00
						0.20	(mg) Total	Wire Bond	% of Total Weight	0.82
						Gold		7440-57-5	100.00	
						Total				100.00
						1.10	(mg) Total	Plating on external leads (pins) - Matte Tin / annealed at 150°C for 1 hour	% of Total Weight	4.62
						Tin		7440-31-5	100.00	
						Total				100.00
						23.900				100.000