



			Termination Base Alloy: Copper Alloy (Cu)			Package Homogeneous Materials: 8.1 Electronics (e.g. pc boards, displays)			J-STD-609A Product Marking and/or Pkg. Labeling e3		
Semiconductor Device Type: PVA 048 VQFN 7x7x0.9 MatteTin											
Basic Substance		CAS Number	"Contained In" Sub-Component	% Total Weight	mg/part	ppm	66.62	(mg) Total	Mold Compound	% of Total Weight	50.78
Silica Fused		60676-86-0	Mold Compound	44.824	58.808	448,235		Silica Fused	60676-86-0	88.27	
Epoxy Resin		Trade Secret	Mold Compound	3.169	4.157	31,687		Epoxy Resin	Trade Secret	6.24	
Phenol Resin		Trade Secret	Mold Compound	2.635	3.458	26,355		Phenol Resin	Trade Secret	5.19	
Carbon Black		1333-86-4	Mold Compound	0.152	0.200	1,523		Carbon Black	1333-86-4	0.3	
Copper		7440-50-8	Lead Frame	41.463	54.400	414,633		Total			
Iron		7439-89-6	Lead Frame	1.020	1.338	10,199	56.94	(mg) Total	Lead Frame	% of Total Weight	43.4
Silver		7440-22-4	Lead Frame	0.827	1.085	8,268		Copper	7440-50-8	95.54	
Zinc		7440-66-6	Lead Frame	0.054	0.071	543		Iron	7439-89-6	2.35	
Phosphorous		7723-14-0	Lead Frame	0.036	0.047	358		Silver	7440-22-4	1.91	
Silver		7440-22-4	Die Attach	1.428	1.874	14,280		Zinc	7440-66-6	0.13	
Epoxy Resin		Trade secret	Die Attach	0.272	0.357	2,720		Phosphorous	7723-14-0	0.08	
Silicon		7440-21-3	Chip (Die)	1.350	1.771	13,500	Total			100.00	2.23
Gold		7440-57-5	Wire Bond	0.450	0.590	4,500	(mg) Total	Die Attach	% of Total Weight	1.7	
Tin		7440-31-5	Plating on external leads (pins) - Matte Tin / annealed at 150°C for 1 hour	2.320	3.044	23,200	Silver	7440-22-4	84		
							Epoxy Resin	Trade secret	16		
			TOTALS:	100.000	131.200	1,000,000	Total			100.00	
		0.1312 g Total Mass									
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/offering/industries/chemicals/plastics/											
The protective "tubes" in which the specific product is shipped are made from polyvinyl chloride (PVC) plastic. "Window envelopes" used to hold the packing slip on the outer box and certain "reels" may be made from PVC plastic.											
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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											

131.20

100.00