



			Termination Base Alloy: Copper Alloy (Cu)			Package Homogeneous Materials: 8.1 Electronics (e.g. pc boards, displays)			JEDEC 97 Product Marking and/or Pkg. Labeling e3	
Semiconductor Device Type: PH (R9X) 144 TQFP 16x16x1mm Matte Tin										
Basic Substance	CAS Number	"Contained In" Sub-Component	% Total Weight	mg/part	ppm	467.72	(mg) Total	Mold Compound	% of Total Weight	68.23
Silica, vitreous (or fused)	60676-86-0	Mold Compound	57.996	397.559	579.955		Silica, vitreous (or fused) Epoxy Resin Phenolic Resin Carbon Black	60676-86-0 Trade Secret Trade Secret 1333-86-4	85.00 8.70 6.00 0.30	
Epoxy Resin	Trade Secret	Mold Compound	5.936	40.691	59.360					
Phenolic Resin	Trade Secret	Mold Compound	4.094	28.063	40.938					
Carbon Black	1333-86-4	Mold Compound	0.205	1.403	2.047					
Copper	7440-50-8	Lead Frame	26.955	184.775	269.547					
Tin	7440-31-5	Lead Frame	0.069	0.474	692	189.68	(mg) Total	Lead Frame	% of Total Weight	27.67
Silver	7440-22-4	Lead Frame	0.527	3.613	5.271		Copper Tin Silver Zinc Chromium	7440-50-8 7440-31-5 7440-22-4 7440-66-6 7440-47-3	97.42 0.25 1.91 0.18 0.25	
Zinc	7440-66-6	Lead Frame	0.050	0.341	498					
Chromium	7440-47-3	Lead Frame	0.069	0.474	692					
Silver (Ag)	7440-22-4	Die Attach	0.423	2.902	4,233					
ANHYDRIDE	Trade Secret	Die Attach	0.046	0.315	459					
EPOXY RESIN	Trade Secret	Die Attach	0.041	0.280	408	3.50	(mg) Total	Die Attach	% of Total Weight	0.51
Silicon	7440-21-3	Chip (Die)	2.090	14.327	20.900		Silver (Ag) ANHYDRIDE EPOXY RESIN	7440-22-4 Trade Secret Trade Secret	83.00 9.00 8.00	
Doped Gold	7440-57-5	Wire Bond	0.280	1.919	2,800					
Tin	7440-31-5	Plating on external leads (pins) - Matte Tin / annealed at 150°C for 1 hour	1.220	8.363	12.200					
TOTALS:			100.000	685.500	1,000,000					
0.6855 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										
						685.500				