



MICROCHIP			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 e4	
Semiconductor Device Type: P9A 20 VQFN 5.0x3.2x0.9mm NiPdAu										
Basic Substance	CAS Number	"Contained In" Sub-Component	% Total Weight	mg/part	ppm	21.04	(mg) Total	Mold Compound	% of Total Weight	51.94
Silica, fused	60676-86-0	Mold Compound	46.746	18.932	467,460		Silica, fused	60676-86-0	90.00	
Epoxy Resin	Trade Secret	Mold Compound	2.519	1.020	25,191		Epoxy Resin	Trade Secret	4.85	
Phenolic Resin	Trade Secret	Mold Compound	2.519	1.020	25,191		Phenolic Resin	Trade Secret	4.85	
Carbon Black	1333-86-4	Mold Compound	0.156	0.063	1,558		Carbon Black	1333-86-4	0.30	
Copper	7440-50-8	Lead Frame	39.643	16.055	396,426		Total 100.00			
Iron	7439-89-6	Lead Frame	0.060	0.024	596	16.09	(mg) Total	Lead Frame	% of Total Weight	39.73
Phosphorous	7723-14-0	Lead Frame	0.016	0.006	159		Copper	7440-50-8	99.78	
Zinc (Metal)	7440-66-6	Lead Frame	0.012	0.005	119		Iron	7439-89-6	0.15	
Silver	7440-22-4	Die Attach	0.932	0.377	9,317		Phosphorous	7723-14-0	0.04	
Acrylic Resin	Trade secret	Die Attach	0.169	0.069	1,694		Zinc (Metal)	7440-66-6	0.03	
Epoxy Resin	Trade secret	Die Attach	0.109	0.044	1,089	Total 100.00				
Silicon	7440-21-3	Chip (Die)	5.210	2.110	52,100	0.49	(mg) Total	Die Attach	% of Total Weight	1.21
Gold	7440-57-5	Wire Bond	0.650	0.263	6,500		Silver	7440-22-4	77.00	
Nickel	7440-02-0	Plating on external leads (pins)	1.187	0.481	11,872		Acrylic Resin	Trade secret	14.00	
Palladium	7440-05-3	Plating on external leads (pins)	0.045	0.018	455		Epoxy Resin	Trade secret	9.00	
Gold	7440-57-5	Plating on external leads (pins)	0.027	0.011	273		Total 100.00			
TOTALS:			100.000	40.500	1,000,000	2.11	Total (mg)	Chip (Die)	% of Total Weight	5.21
0.0405 g Total Mass							Doped Silicon	7440-21-3	100.00	
							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/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										

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Compliance with the above EU Directives has been verified via internal design controls, supplier declarations, and /or analytical test data.

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