



 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: (NCA) 016 VQFN 3x3x0.9mm NiPdAu										
Basic Substance	CAS Number	"Contained In" Sub-Component	% Total Weight	mg/part	ppm	8.64	(mg) Total	Mold Compound	% of Total Weight	40.57
Silica, fused	60676-86-0	Mold Compound	36.513	7.777	365,130		Silica, fused	60676-86-0	90.00	
Epoxy Resin	Trade Secret	Mold Compound	1.968	0.419	19,676		Epoxy Resin	Trade Secret	4.85	
Phenolic Resin	Trade Secret	Mold Compound	1.968	0.419	19,676		Phenolic Resin	Trade Secret	4.85	
Carbon Black	1333-86-4	Mold Compound	0.122	0.026	1,217		Carbon Black	1333-86-4	0.30	
					Total		100.00			
Copper	7440-50-8	Lead Frame	51.657	11.003	516,566	11.31	(mg) Total	Lead Frame	% of Total Weight	53.09
Iron	7439-89-6	Lead Frame	1.221	0.260	12,211		Copper	7440-50-8	97.30	
Phosphorous	7723-14-0	Lead Frame	0.133	0.028	1,327		Iron	7439-89-6	2.30	
Zinc (Metal)	7440-66-6	Lead Frame	0.080	0.017	796		Phosphorous	7723-14-0	0.25	
Silver	7440-22-4	Die Attach	0.517	0.110	5,166		Zinc (Metal)	7440-66-6	0.15	
Epoxy Resin	9003-36-5	Die Attach	0.183	0.039	1,834		Total	100.00		
Silicon	7440-21-3	Chip (Die)	3.300	0.703	33,000	0.15	(mg) Total	Die Attach	% of Total Weight	0.70
Gold	7440-57-5	Wire Bond	0.500	0.107	5,000		Silver	7440-22-4	73.80	
Nickel	7440-02-0	Plating on external leads (pins)	1.656	0.353	16,560		Epoxy Resin	9003-36-5	26.20	
Palladium	7440-05-3	Plating on external leads (pins)	0.092	0.020	920		Total	100.00		
Gold	7440-57-5	Plating on external leads (pins)	0.092	0.020	920	0.70	Total (mg)	Chip (Die)	% of Total Weight	3.30
TOTALS:			100.000	21.300	1,000,000		Doped Silicon	7440-21-3	100.00	
0.0213 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/globaleng/pages/offerings/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										

21.30

100.00

21.30

100.00