Package Material Content Declaration

Package Description	28-Pad, 4 x 4 x 1.0 mm Body, Lead Pitch 0.45 mm, 2.4 x 2.4 mm Exposed Pad, Plastic Very Thin Quad Flat No Lead Package (VQFN)		
Lead Finish	Nickel-Palladium-Gold (Ni-Pd-Au)	**Package Code / GPC**	RPB / ZBV
J-STD-609 Category	e4	**Termination Base Alloy:**	Copper

Package Material Declaration

				Homogeneous Material		Package	
Material	**Substance**	**CAS #**	**Weight (mg)**	**Percentage**	**ppm**	**Percentage**	**ppm**
Leadframe	Copper (Cu)	7440-50-8	14.290	97.4	974000	35.23	352264
	Iron (Fe)	7439-89-6	0.352	2.4	24000	0.87	8680
	Phosphorous (P)	7723-14-0	0.015	0.1	1000	0.04	362
	Zinc (Zn)	7440-66-6	0.015	0.1	1000	0.04	362
Sub-Total			**14.672**	**100.0**	**1000000**	**36.17**	**361667**
Integrated Circuit	Silicon (Si)	7440-21-3	3.910	100.0	1000000	9.64	96384
Sub-Total			**3.910**	**100.0**	**1000000**	**9.64**	**96384**
Die Attach	Silver (Ag)	7440-22-4	0.199	76.6	766000	0.49	4897
	Acrylic Resin	Proprietary	0.022	8.3	83000	0.05	531
	Acrylate	Proprietary	0.014	5.3	53000	0.03	339
	Polybutadiene Copolymer	Proprietary	0.013	5.2	52000	0.03	332
	Epoxy Resin	Proprietary	0.006	2.4	24000	0.02	153
	Additive	Proprietary	0.002	0.9	9000	0.01	58
	Butadiene Copolymer	Proprietary	0.002	0.9	9000	0.01	58
	Peroxide	Proprietary	0.001	0.4	4000	0.00	26
Sub-Total			**0.259**	**100.0**	**1000000**	**0.64**	**6393**
Bond Wire	Copper (Cu)	7440-50-8	0.155	97.6	976000	0.38	3809
	Palladium (Pd)	7440-05-3	0.004	2.4	24000	0.01	94
Sub-Total			**0.158**	**100.0**	**1000000**	**0.39**	**3903**
Encapsulation	Silica (Amorphous) A	60676-86-0	14.758	69.2	692000	36.38	363795
	Silica (Amorphous) B	7631-86-9	3.007	14.1	141000	7.41	74126
	Epoxy Resin	Proprietary	1.941	9.1	91000	4.78	47840
	Phenol Resin	Proprietary	1.514	7.1	71000	3.73	37326
	Carbon Black	1333-86-4	0.107	0.5	5000	0.26	2629
Sub-Total			**21.326**	**100.0**	**1000000**	**52.57**	**525715**
Terminal Plating	Nickel (Ni)	7440-02-0	0.223	92.7	927000	0.55	5504
	Palladium (Pd)	7440-05-3	0.016	6.5	65000	0.04	386
	Gold (Au)	7440-57-5	0.002	0.8	8000	0.00	47
Sub-Total			**0.241**	**100.0**	**1000000**	**0.59**	**5937**
Total			**40.567**			**100.00**	**1000000**

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/ .

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.