MICROCHIP

Package Material Content Declaration

Package Description	44-Pad, 7 x 7 x 1.0 mm Body, Lead Pitch 0.50 mm, 5.20 mm Exposed Pad, Plastic Very Thin Quad Flat No Lead Package (VQFN)		
Lead Finish	Matte Tin (Sn)	**Package Code / GPC**	SSB / ZWS
J-STD-609 Category	e3	**Termination Base Alloy:**	Copper

Package Material Declaration

Material	Substance	CAS #	Weight (mg)	Homogeneous Material		Package	
				Percentage	ppm	Percentage	ppm
Leadframe	Copper (Cu)	7440-50-8	58.239	97.4	974000	42.23	422309
	Iron (Fe)	7439-89-6	1.435	2.4	24000	1.04	10406
	Phosphorous (P)	7723-14-0	0.060	0.1	1000	0.04	434
	Zinc (Zn)	7440-66-6	0.060	0.1	1000	0.04	434
Sub-Total			**59.794**	**100.0**	**1000000**	**43.36**	**433582**
Integrated Circuit	Silicon (Si)	7440-21-3	7.524	100.0	1000000	5.46	54557
Sub-Total			**7.524**	**100.0**	**1000000**	**5.46**	**54557**
Die Attach	Silver (Ag)	7440-22-4	0.382	76.6	766000	0.28	2772
	Acrylic Resin	Proprietary	0.041	8.3	83000	0.03	300
	Acrylate	Proprietary	0.026	5.3	53000	0.02	192
	Polybutadiene Copolymer	Proprietary	0.026	5.2	52000	0.02	188
	Epoxy Resin	Proprietary	0.012	2.4	24000	0.01	87
	Additive	Proprietary	0.004	0.9	9000	0.00	33
	Butadiene Copolymer	Proprietary	0.004	0.9	9000	0.00	33
	Peroxide	Proprietary	0.002	0.4	4000	0.00	14
Sub-Total			**0.499**	**100.0**	**1000000**	**0.36**	**3619**
Die Pad Plating	Silver (Ag)	7440-22-4	1.341	100.0	1000000	0.97	9723
Sub-Total			**1.341**	**100.0**	**1000000**	**0.97**	**9723**
Bond Wire	Copper (Cu)	7440-50-8	0.159	97.6	976000	0.12	1151
	Palladium (Pd)	7440-05-3	0.004	2.4	24000	0.00	28
Sub-Total			**0.163**	**100.0**	**1000000**	**0.12**	**1180**
Encapsulation	Silica (Amorphous) A	60676-86-0	51.053	77.6	776000	37.02	370199
	Epoxy Resin	Proprietary	5.790	8.8	88000	4.20	41981
	Silica (Amorphous) B	7631-86-9	5.790	8.8	88000	4.20	41981
	Phenol Resin	Proprietary	2.632	4.0	40000	1.91	19082
	Carbon Black	1333-86-4	0.526	0.8	8000	0.38	3816
Sub-Total			**65.790**	**100.0**	**1000000**	**47.71**	**477061**
Terminal Plating	Tin (Sn)	7440-31-5	2.797	100.0	1000000	2.03	20279
Sub-Total			**2.797**	**100.0**	**1000000**	**2.03**	**20279**
Total			**137.907**			**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.
Microchip Technology Incorporated believes the information in this form concerning substances restricted by RoHS in Microchip Technology Incorporated's semiconductor devices in their original packing materials is true and correct to the best of its knowledge and belief, as of the date listed in this form. Microchip Technology Incorporated cannot guarantee the completeness and accuracy of data in this form because it has been compiled based on the ranges provided in Material Safety Data Sheets provided by raw material suppliers. Supplier information is often protected from disclosure as trade secrets and some information may not have been provided by subcontract assemblers and raw material suppliers. Information is provided only as estimates of the average weight of these parts and the average weight of anticipated significant toxic metals components. These estimates do not include trace levels of dopants, metals, and non-metal materials contained within silicon devices (silicon IC) in the finished parts.
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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.