## MICROCHIP

## **Package Material Content Declaration**

MICRO	CHIP						
Package Description	64-Lead, 10 x 10 x 1.4 mm Body, 0.50	mm Lead Pitch	, 2.0 mm Footpri	nt, Low-Profile	Plastic Quad Fla	t Package (LQFP)	
Lead Finish	Matte Tin (Sn)		Package Code / GPC		V6X / AKN		
I-STD-609 Category	e3		Termination Base Alloy:		Copper		
		Package Mat	erial Declaration	1			
				Homogeneous Material		Package	
Material	Substance	CAS#	Weight (mg)	Percentage	ppm	Percentage	ppm
Leadframe	Copper (Cu)	7440-50-8	88.620	96.2	962000	24.06	240590
	Nickel (Ni)	7440-02-0	2.764	3.0	30000	0.75	7503
	Silicon (Si)	7440-21-3	0.553	0.6	6000	0.15	1501
	Magnesium (Mg)	7439-95-4	0.184	0.2	2000	0.05	500
Sub-Total			92.121	100.0	1000000	25.01	250094
Integrated Circuit	Silicon (Si)	7440-21-3	10.696	100.0	1000000	2.90	29039
Sub-Total			10.696	100.0	1000000	2.90	29039
Die Attach	Silver (Ag)	7440-22-4	0.638	84.4	844000	0.17	1731
	2-Propenoic Acid, Dodecyl Ester	2156-97-0	0.028	3.7	37000	0.01	76
	Dicyclopentyldimethylene Diacrylate	42594-17-2	0.028	3.7	37000	0.01	76
	Diglycidylphenyl Glycidyl Ether	13561-08-5	0.028	3.7	37000	0.01	76
	Polybutadiene Dimethacrylate-	Proprietary	0.028	3.7	37000	0.01	76
	1,6-Hexanediol Diacrylate	13048-33-4	0.006	0.8	8000	0.00	16
Sub-Total			0.755	100.0	1000000	0.21	2051
Die Pad Plating	Silver (Ag)	7440-22-4	0.960	100.0	1000000	0.26	2607
Sub-Total			0.960	100.0	1000000	0.26	2607
Bond Wire	Copper (Cu)	7440-50-8	0.363	97.6	976000	0.10	987
	Palladium (Pd)	7440-05-3	0.009	2.4	24000	0.00	24
Sub-Total			0.372	100.0	1000000	0.10	1011
Encapsulation	Silica	60676-86-0	229.740	89.2	892000	62.37	623708
	Epoxy Resin	Proprietary	13.135	5.1	51000	3.57	35660
	Phenol Resin	Proprietary	9.014	3.5	35000	2.45	24473
	Others	Proprietary	5.151	2.0	20000	1.40	13984
	Carbon Black	1333-86-4	0.515	0.2	2000	0.14	1398
Sub-Total		·	257.557	100.0	1000000	69.92	699224
Terminal Plating	Tin (Sn)	7440-31-5	6.248	100.0	1000000	1.70	16962
Sub-Total			6.248	100.0	1000000	1.70	16962
Total			368.346	·		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.

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