

 Package Material Content Declaration							
Package Description	8-Lead, 3.0 mm Body, Plastic Thin Shrink Small Outline Package (TSSOP)						
Lead Finish	Nickel-Palladium-Gold (Ni-Pd-Au)	Package Code / GPC	N2B / TZD				
J-STD-609 Category	e4	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	8.243	96.2	962000	35.57	355692
	Nickel (Ni)	7440-02-0	0.257	3.0	30000	1.11	11092
	Silicon (Si)	7440-21-3	0.051	0.6	6000	0.22	2218
	Magnesium (Mg)	7439-95-4	0.017	0.2	2000	0.07	739
Sub-Total			8.569	100.0	1000000	36.97	369742
Integrated Circuit	Silicon (Si)	7440-21-3	0.525	100.0	1000000	2.27	22654
Sub-Total			0.525	100.0	1000000	2.27	22654
Die Attach	Silver (Ag)	7440-22-4	0.039	80.0	800000	0.17	1679
	Isobornyl Methacrylate	7534-94-3	0.008	16.0	160000	0.03	336
	N,N-(m-phenylene)dimaldimide	3006-93-7	0.002	3.4	34000	0.01	71
	Fluoroaliphatic Polymeric Esters	1017237-78-3	0.000	0.6	6000	0.00	13
Sub-Total			0.049	100.0	1000000	0.21	2099
Bond Wire	Gold (Au)	7440-57-5	0.038	100.0	1000000	0.16	1622
Sub-Total			0.038	100.0	1000000	0.16	1622
Encapsulation	Silica (Amorphous)	60676-86-0	11.780	85.4	854000	50.83	508309
	Epoxy Resin A	Proprietary	1.062	7.7	77000	4.58	45831
	Epoxy Resin B	29690-82-2	0.441	3.2	32000	1.90	19047
	Phenol Resin	Proprietary	0.441	3.2	32000	1.90	19047
	Carbon Black	1333-86-4	0.069	0.5	5000	0.30	2976
Sub-Total			13.794	100.0	1000000	59.52	595210
Terminal Plating	Nickel (Ni)	7440-02-0	0.186	92.7	927000	0.80	8041
	Palladium (Pd)	7440-05-3	0.013	6.5	65000	0.06	564
	Gold (Au)	7440-57-5	0.002	0.8	8000	0.01	69
Sub-Total			0.201	100.0	1000000	0.87	8674
Total			23.175			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>.