

		Package Material Content Declaration						
Package Description	28-Lead, 4.4 mm Body, Plastic Thin Shrink Small Outline Package (TSSOP)							
Lead Finish	Matte Tin (Sn)	Package Code / GPC		NRB / TFL				
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	30.718	97.4	974000	28.88	288798	
	Iron (Fe)	7439-89-6	0.757	2.4	24000	0.71	7116	
	Phosphorous (P)	7723-14-0	0.032	0.1	1000	0.03	297	
	Zinc (Zn)	7440-66-6	0.032	0.1	1000	0.03	297	
Sub-Total			31.538	100.0	1000000	29.65	296507	
Integrated Circuit	Silicon (Si)	7440-21-3	3.004	100.0	1000000	2.82	28245	
Sub-Total			3.004	100.0	1000000	2.82	28245	
Die Attach	Silver (Ag)	7440-22-4	0.163	73.1	731000	0.15	1531	
	Bisphenol-F Epichlorhydrin Resin	9003-36-5	0.013	6.0	60000	0.01	126	
	Polyglycidyl Ester	68475-94-5	0.013	6.0	60000	0.01	126	
	2,6-Diglycidyl Phenyl Allyl Ether Oligomer	Proprietary	0.012	5.2	52000	0.01	109	
	Copper Oxide	1317-38-0	0.010	4.6	46000	0.01	96	
	gamma-Butyrolactone	96-48-0	0.005	2.3	23000	0.00	48	
	Poly(oxypropylene)diamine	Proprietary	0.005	2.3	23000	0.00	48	
	1,4-Bis(2,3-epoxypropoxy)butane	2425-79-8	0.001	0.5	5000	0.00	10	
Sub-Total			0.223	100.0	1000000	0.21	2094	
Die Pad Plating	Silver (Ag)	7440-22-4	0.450	100.0	1000000	0.42	4231	
Sub-Total			0.450	100.0	1000000	0.42	4231	
Bond Wire	Gold (Au)	7440-57-5	0.224	100.0	1000000	0.21	2103	
Sub-Total			0.224	100.0	1000000	0.21	2103	
Encapsulation	Silica Fused	60676-86-0	59.052	86.4	864000	55.52	555182	
	Epoxy Resin	Proprietary	5.399	7.9	79000	5.08	50763	
	Phenol Resin	Proprietary	3.691	5.4	54000	3.47	34699	
	Carbon Black	1333-86-4	0.205	0.3	3000	0.19	1928	
Sub-Total			68.348	100.0	1000000	64.26	642571	
Terminal Plating	Tin (Sn)	7440-31-5	2.579	100.0	1000000	2.42	24249	
Sub-Total			2.579	100.0	1000000	2.42	24249	
Total			106.366			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>.