



Semiconductor Device Type: GZ GZX 20 UQFN 4x4x0.5mm Matte Tin						Termination Base Alloy: Copper Alloy (Cu)			Package Homogeneous Materials: 8.1 Electronics (e.g. pc boards, displays)			JEDEC 97 Product Marking and/or Pkg. Labeling e3
Basic Substance	CAS Number	"Contained In" Sub-Component	% Total Weight	mg/part	ppm							
Silica, fused	60676-86-0	Mold Compound	46.413	9.607	464,130	10.67			51.57			
Epoxy Resin	Trade Secret	Mold Compound	2.501	0.518	25,011	Silica, fused			60676-86-0			
Phenolic Resin	Trade Secret	Mold Compound	2.501	0.518	25,011	Epoxy Resin			Trade Secret			
Carbon Black	1333-86-4	Mold Compound	0.155	0.032	1,547	Phenolic Resin			Trade Secret			
Copper	7440-50-8	Lead Frame	40.827	8.451	408,266	Carbon Black			1333-86-4			
Tin	7440-31-5	Lead Frame	0.105	0.022	1,048	Total			100.00			
Silver	7440-22-4	Lead Frame	0.798	0.165	7,984	8.68			41.91			
Zinc	7440-66-6	Lead Frame	0.075	0.016	754	Copper			7440-50-8			
Chromium	7440-47-3	Lead Frame	0.105	0.022	1,048	Tin			7440-31-5			
Silver (Ag)	7440-22-4	Die Attach	0.644	0.133	6,437	Silver			7440-22-4			
Acrylate resin	Trade Secret	Die Attach	0.152	0.031	1,517	Zinc			7440-66-6			
Proprietary Curing agent & Hardener	Trade Secret	Die Attach	0.025	0.005	246	Chromium			7440-47-3			
Silicon	7440-21-3	Chip (Die)	2.180	0.451	21,800	Total			100.00			
Gold	7440-57-5	Wire Bond	0.530	0.110	5,300	0.17			0.82			
Tin	7440-31-5	Plating on external leads (pins) - Matte Tin / annealed at 150°C for 1 hour	2.990	0.619	29,900	Silver (Ag)			7440-22-4			
<b>TOTALS:</b>			<b>100.000</b>	<b>20.700</b>	<b>1,000,000</b>	Acrylate resin			Trade Secret			
<b>0.0207 g Total Mass</b>						Proprietary Curing agent & Hardener			Trade Secret			
						Total			100.00			
						0.45			2.18			
						Doped Silicon			7440-21-3			
						Total			100.00			
						0.11			0.53			
						(mg) Total			Wire Bond			
						Gold			7440-57-5			
						Total			100.00			
						0.62			2.99			
						(mg) Total			Plating on external leads (pins) - Matte Tin / annealed at 150°C for 1 hour			
						Tin			7440-31-5			
						Total			100.00			

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/leng/pages/offering/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>