

 MICROCHIP			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 e1			
Semiconductor Device Type: MME / CP / CU (2MX) 034 WFBGA 4x6x0.8mm SAC												
Basic Substance		CAS Number	"Contained In" Sub-Component	% Total Weight	mg/part	ppm	14.80	(mg) Total	Mold Compound	% of Total Weight	39.89	
FUSED SILICA		60676-86-0	Mold Compound	35.901	13.319	359,010		FUSED SILICA	60676-86-0	90.00		
EPOXY RESINS, CURED		Trade Secret	Mold Compound	1.935	0.718	19,347		EPOXY RESINS, CURED	Trade Secret	4.85		
HIGH CROSS-LINKED HIGH MOLECULAR EPOXY / EPOXY PHENOL RESIN		Trade Secret	Mold Compound	1.935	0.718	19,347		EPOXY PHENOL RESIN	Trade Secret	4.85		
CARBON BLACK		1333-86-4	Mold Compound	0.120	0.044	1,197		CARBON BLACK	1333-86-4	0.30		
Copper		7440-50-8	Lead Frame	10.935	4.057	109,351		Total			100.00	
Glass fibers		65997-17-3	Lead Frame	6.518	2.418	65,184	11.30	(mg) Total	Lead Frame	% of Total Weight	30.46	
Phenol, formaldehyde, (chloromethyl)oxirane polymer		9003-36-5	Lead Frame	6.518	2.418	65,184	enol, formaldehyde, (chloromethyl)oxirane polymer	Copper	7440-50-8	35.90		
Silica, chemically prepared		7631-86-9	Lead Frame	2.437	0.904	24,368		Glass fibers	65997-17-3	21.40		
Nickel		7440-02-0	Lead Frame	1.188	0.441	11,879		9003-36-5	21.40			
Barite		7727-43-7	Lead Frame	0.762	0.283	7,615		Silica, chemically prepared	7631-86-9	8.00		
Magnesium silicate		14807-96-6	Lead Frame	0.609	0.226	6,092		Nickel	7440-02-0	3.90		
Araldite GY 250		25068-38-6	Lead Frame	0.609	0.226	6,092		Barite	7727-43-7	2.50		
(2-Methoxymethylethoxy)propanol		34590-94-8	Lead Frame	0.244	0.090	2,437		Magnesium silicate	14807-96-6	2.00		
Misc.		system	Lead Frame	0.457	0.170	4,569		Araldite GY 250	25068-38-6	2.00		
Aluminium-hydroxide-oxide		24623-77-6	Lead Frame	0.152	0.057	1,523		(2-Methoxymethylethoxy)propanol	34590-94-8	0.80		
Gold		7440-57-5	Lead Frame	0.030	0.011	305		Misc.	system	1.50		
FUSED SILICA		60676-86-0	Die Attach	9.576	3.553	95,760		Aluminium-hydroxide-oxide	24623-77-6	0.50		
Basic Durometer:Phenolic resin (Compound of polymeric network)		26834-02-6	Die Attach	2.394	0.888	23,940		Gold	7440-57-5	0.10		
Silicon		7440-21-3	Chip (Die)	3.790	1.406	37,900	TOTALS:			100.000	37.100	1,000,000
Doped Gold		7440-57-5	Wire Bond	0.950	0.352	9,500	4.44	(mg) Total	Die Attach	% of Total Weight	11.97	
Tin		7440-31-5	Plating on external leads (pins)	12.358	4.585	123,577		FUSED SILICA	60676-86-0	80.00		
Silver		7440-22-4	Plating on external leads (pins)	0.518	0.192	5,176		Basic Durometer:Phenolic resin	26834-02-6	20.00		
Copper		7440-50-8	Plating on external leads (pins)	0.065	0.024	647	TOTALS:			100.000	37.100	1,000,000
0.0371 g Total Mass												
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/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.												
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.												
Microchip Technology Incorporated does not provide any warranty, express or implied, with respect to the information provided in this declaration. The exclusive, limited product warranties provided by Microchip Technology Incorporated and its subsidiaries are contained in Microchip's standard terms and conditions of sale. These are provided in Microchip's quotations, sales order acknowledgement, and invoices.												
Microchip disclaims any duty to notify users of updates or changes to Material Content Declarations and shall not be liable for any damages, direct or indirect, consequential or otherwise, suffered by users or third parties as a result of the users' reliance on the information in Material Content Declarations (MCD) or independent third party test reports (SGS) or of this Certificate of Compliance for semiconductor products.												
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												