



MICROCHIP			Termination Base Alloy: Copper Alloy (Cu)			Package Homogeneous Materials			JEDEC 97 Product Marking and/or Pkg. Labeling e3		
Semiconductor Device Type: P and PL (S2X) 040 PDIP .600in Matte Tin											
Basic Substance	CAS Number	"Contained in" Sub-Component	% Total Weight	mg/part	ppm	5157.75	(mg) Total	Mold Compound	% of Total Weight	79.35	
Fused Silica	60676-86-0	Mold Compound	57.132	3713.580	571.320		Fused Silica	60676-86-0	72.00		
Metal Hydro Oxide	Trade Secret	Mold Compound	8.729	567.353	87.285		Metal Hydro Oxide	Trade Secret	11.00		
Epoxy Resin	Trade Secret	Mold Compound	5.555	361.043	55.545		Epoxy Resin	Trade Secret	7.00		
Phenol Resin	Trade Secret	Mold Compound	5.555	361.043	55.545		Phenol Resin	Trade Secret	7.00		
SiO2	14808-60-7	Mold Compound	1.984	128.944	19.838		SiO2	14808-60-7	2.50		
Carbon Black	1333-86-4	Mold Compound	0.397	25.789	3.968		Carbon Black	1333-86-4	0.50		
Copper	7440-50-8	Lead Frame Tape	9.984	648.938	99.837		Total			100.00	
Iron	7439-89-6	Lead Frame Tape	0.246	15.962	2.456	679.25	(mg) Total	Lead Frame	% of Total Weight	10.45	
Silver	7440-22-4	Lead Frame Tape	0.199	12.940	1.991		Copper	7440-50-8	95.54		
Zinc	7440-66-6	Lead Frame Tape	0.013	0.849	131		Iron	7439-89-6	2.35		
Phosphorous	7723-14-0	Lead Frame Tape	0.009	0.560	86		Silver	7440-22-4	1.91		
Polyimide	25038-81-7	Lead Frame Tape	0.215	13.975	2.150		Zinc	7440-66-6	0.13		
Poly - ethylene – terephthalate	25038-59-9	Lead Frame Tape	0.190	12.350	1.900		Phosphorous	7723-14-0	0.08		
NBR	9003-18-3	Lead Frame Tape	0.035	2.275	350		Total			100.00	
Bismaleimide	79922-55-7	Lead Frame Tape	0.030	1.950	300	32.50	(mg) Total	Lead Frame Tape	% of Total Weight	0.5	
Phenol resin	53-20-5 / 9016-8	Lead Frame Tape	0.030	1.950	300		Polyimide	25038-81-7	43.00		
Silver	7440-22-4	Die Attach	0.550	35.763	5,502		Poly - ethylene – terephthalate	25038-59-9	38.00		
Epoxy Resin	9003-36-5	Die Attach	0.110	7.152	1,100		NBR	9003-18-3	7.00		
Diluent	3101-60-8	Die Attach	0.055	3.573	550		Bismaleimide	79922-55-7	6.00		
Phenolic hardener	Trade secret	Die Attach	0.022	1.428	220		Phenol resin	28453-20-5 / 9016-83-5	6.00		
Amine type hardener	827-43-0	Die Attach	0.011	0.717	110		Total			100.00	
Dicyandiamide	461-58-5	Die Attach	0.002	0.117	18	48.75	(mg) Total	Die Attach	% of Total Weight	0.75	
Silicon	7440-21-3	Chip (Die)	7.500	487.500	75,000		Silver	7440-22-4	73.36		
Copper	7440-50-8	Wire Bond palladium coated copper (CuPd)	0.197	12.773	1,965		Epoxy Resin	9003-36-5	14.67		
Palladium	7440-05-3	Wire Bond palladium coated copper (CuPd)	0.004	0.228	35		Diluent	3101-60-8	7.33		
Tin	7440-31-5	Plating on external leads (pins) - Matte Tin / annealed at 150°C for 1 hour	1.250	81.250	12,500		Phenolic hardener	Trade secret	2.93		
TOTALS:			100.000	6,500.000	1,000,000		Amine type hardener	827-43-0	1.47		
6.5000 g Total Mass							Dicyandiamide	461-58-5	0.24		
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)						Total					100.00
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.											
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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											
						487.50	Total (mg)	Chip (Die)	% of Total Weight	7.5	
							Doped Silicon	7440-21-3	100.00		
						Total			100.00		
						13.00	(mg) Total	Wire Bond palladium coated copper (CuPd)	% of Total Weight	0.2	
							Copper	7440-50-8	98.25		
							Palladium	7440-05-3	1.75		
						Total			100.00		
						81.25	(mg) Total	Plating on external leads (pins) - Matte Tin / annealed at 150°C for 1 hour	% of Total Weight	1.25	
							Tin	7440-31-5	100.00		
						Total			100.00		
						6,500.000				100.000	