Compliant with IEC 62474/ D9.00

Compliant to IEC 61249-2-21:2003

Semiconductor Device Type: CF Basic Substance CAS Nu Fused Silica 60676- Epoxy Resin Trade S Metal Hydroxide Trade S Phenol Resin Trade S Carbon Black 1333-8 Copper 7440-4 Nickel 7440-4 Silver 7440-4 Silver 7440-7 Magnesium 7439-4 Silver 7440-7 Acrylic Resin Trade s Epoxy Resin Trade s Silicon 7440-7 Gold 7440-7 Tin 7440-7	## Contained In Sub-Comport 36-0 Mold Compour ecret Mold Compour 6-4 Mold Compour 6-6 Mold Compour 6-7 Mold Compour 6-8 Lead Frame 6-9 Lead Frame 6-9 Lead Frame 6-10 Lead Frame 6-11 Lead Frame 6-24 Lead Frame 6-30 Lead Frame 6-4 Lead Frame 6-50 Lead Frame 6-60 Lead Frame 6-70 Lead	n" ent nd nd nd nd nd se	% Total Weight 57.883 4.037 3.900 2.463 0.137 24.020 0.641 0.421 0.113 0.025 1.155 0.210 0.135 2.900 0.260	mg/part 213.184 14.867 14.363 9.072 0.504 88.465 2.359 1.550 0.418 0.093 4.254 0.773 0.497 10.681 0.958	ppm 578,833 40,368 38,999 24,631 1,368 240,198 6,406 4,209 1,135 252 211,550 2,100 1,350 2,9000	92.89	(mg) Total Fused Silica Epoxy Resin Metal Hydroxide Phenol Resin Carbon Black (mg) Total Copper Nickel Silicon Magnesium	Mold Compound 60676-86-0 Trade Secret Trade Secret Trade Secret 1333-86-4 Total Lead Frame 7440-50-8 7440-02-0 7740-22-4 7740-21-3 77439-95-4 Total	% ot Total Weight 84.60 5.90 5.70 3.60 0.20 100.00 % of Total Weight 95.24 2.54 1.67 0.45 0.10	25.22
Fused Silica 60676- Epoxy Resin Trade S Metal Hydroxide Trade S Phenol Resin Trade S Carbon Black 1333-8 Copper 7440- Nickel 7440-0 Silver 7440-0 Silver 7440-0 Silver 7440-0 Silver 7440-0 Silver 7440-0 Acrylic Resin Trade s Epoxy Resin Trade s Silicon 7440-0 Gold 7440-0 Tin 7440-0	Mold Compour	nd nd nd nd nd nd self self self self self self self self	57.883 4.037 3.900 2.463 0.137 24.020 0.641 0.421 0.113 0.025 1.155 0.210 0.135	213.184 14.867 14.363 9.072 0.504 88.465 2.359 1.550 0.418 0.093 4.254 0.773 0.497	578,833 40,368 38,999 24,631 1,368 240,198 6,406 4,209 1,135 252 11,550 2,100 1,350		Epoxy Resin Metal Hydroxide Phenol Resin Carbon Black (mg) Total Copper Nickel Silver Silicon	Trade Secret Trade Secret Trade Secret Trade Secret 1333-86-4 Total Lead Frame 7440-50-8 7440-02-0 7440-22-4 7440-21-3 7439-95-4	5.90 5.70 3.60 0.20 100.00 % of Total Weight 95.24 2.54 1.67 0.45	25.22
Epoxy Resin Trade S	ecret Mold Compour ecret Mold Compour ecret Mold Compour 6-4 Mold Compour 0-8 Lead Frame 0-2-0 Lead Frame 12-4 Lead Frame 11-3 Lead Frame 15-4 Lead Frame 2-4 Die Attach ecret Die Attach 11-3 Chip (Die) 11-3 Chip (Die) 17-5 Wire Bond	nd nd nd nd nd	4.037 3.900 2.463 0.137 24.020 0.641 0.421 0.113 0.025 1.155 0.210 0.135	14.867 14.363 9.072 0.504 88.465 2.359 1.550 0.418 0.093 4.254 0.773 0.497	40,368 38,999 24,631 1,368 240,198 6,406 4,209 1,135 252 11,550 2,100 1,350		Epoxy Resin Metal Hydroxide Phenol Resin Carbon Black (mg) Total Copper Nickel Silver Silicon	Trade Secret Trade Secret Trade Secret Trade Secret 1333-86-4 Total Lead Frame 7440-50-8 7440-02-0 7440-22-4 7440-21-3 7439-95-4	5.90 5.70 3.60 0.20 100.00 % of Total Weight 95.24 2.54 1.67 0.45	25.22
Metal Hydroxide Trade S Phenol Resin Trade S Carbon Black 1333-8 Copper 7440-1 Nickel 7440-2 Silver 7440-2 Silicon 7440-2 Magnesium 7439-3 Silver 7440-2 Acrylic Resin Trade s Epoxy Resin Trade s Silicon 7440-2 Gold 7440-2 Tin 7440-3	ecret Mold Compour ecret Mold Compour 6-4 Mold Compour 60-8 Lead Frame 12-0 Lead Frame 12-1 Lead Frame 15-1 Lead Frame 15-4 Lead Frame 12-4 Die Attach ecret Die Attach ecret Die Attach 11-1-3 Chip (Die) 77-5 Wire Bond	nd nd nd s	3.900 2.463 0.137 24.020 0.641 0.421 0.113 0.025 1.155 0.210 0.135	14.363 9.072 0.504 88.465 2.359 1.550 0.418 0.093 4.254 0.773 0.497	38,999 24,631 1,368 240,198 6,406 4,209 1,135 252 11,550 2,100 1,350		Metal Hydroxide Phenol Resin Carbon Black (mg) Total Copper Nickel Silver Silicon	Trade Secret Trade Secret 1333-86-4 Total Lead Frame 7440-50-8 7440-22-4 7440-21-3 7439-95-4	5.70 3.60 0.20 100.00 % of Total Weight 95.24 2.54 1.67 0.45	25.22
Phenol Resin Trade S Carbon Black 1333-8 Copper 7440-1 Nickel 7440-2 Silver 7440-2 Silicon 7440-2 Magnesium 7439-3 Silver 7440-2 Acrylic Resin Trade s Epoxy Resin Trade s Silicon 7440-2 Gold 7440-1 Tin 7440-3	ecret Mold Compour 6-4 Mold Compour 0-8 Lead Frame 12-0 Lead Frame 12-1 Lead Frame 11-3 Lead Frame 15-4 Lead Frame 12-4 Die Attach 15-8 Die Attach 15-9 Die Attach 16-1 Chip (Die) 17-3 Chip (Die) 17-5 Wire Bond	nd nd s	2.463 0.137 24.020 0.641 0.421 0.113 0.025 1.155 0.210 0.135 2.900	9.072 0.504 88.465 2.359 1.550 0.418 0.093 4.254 0.773 0.497	24,631 1,368 240,198 6,406 4,209 1,135 252 11,550 2,100 1,350		Phenol Resin Carbon Black (mg) Total Copper Nickel Silver Silicon	Trade Secret 1333-86-4 Total Lead Frame 7440-50-8 7440-02-0 7440-22-4 7440-21-3 7439-95-4	3.60 0.20 100.00 % of Total Weight 95.24 2.54 1.67 0.45	25.22
Carbon Black 133-8 Copper 7440-1 Nickel 7440-1 Nickel 7440-2 Silver 7440-2 Silicon 7440-2 Magnesium 7439-9 Silver 7440-2 Acrylic Resin Trades Epoxy Resin Trade s Silicon 7440-2 Gold 7440-2 Tin 7440-3	6-4 Mold Compour 0-8 Lead Frame 12-0 Lead Frame 12-4 Lead Frame 11-3 Lead Frame 15-4 Lead Frame 12-4 Die Attach 10-8 Attach 10-9 Attach 10-1 Attach 11-3 Chip (Die) 17-5 Wire Bond	nd	0.137 24.020 0.641 0.421 0.113 0.025 1.155 0.210 0.135 2.900	0.504 88.465 2.359 1.550 0.418 0.093 4.254 0.773 0.497 10.681	1,368 240,198 6,406 4,209 1,135 252 11,550 2,100 1,350		Carbon Black (mg) Total Copper Nickel Silver Silicon	1333-86-4 Total Lead Frame 7440-50-8 7440-02-0 7440-22-4 7440-21-3 7439-95-4	0.20 100.00 % of Total Weight 95.24 2.54 1.67 0.45	25.22
Copper 7440-t Nickel 7440-t Silver 7440-t Silver 7440-t Silicon 7440-t Magnesium 7439-t Silver 7440-t Acrylic Resin Trade s Epoxy Resin Trade s Silicon 7440-t Gold 7440-t Tin 7440-t	10-8)	24.020 0.641 0.421 0.113 0.025 1.155 0.210 0.135 2.900	88.465 2.359 1.550 0.418 0.093 4.254 0.773 0.497 10.681	240,198 6,406 4,209 1,135 252 11,550 2,100 1,350		(mg) Total Copper Nickel Silver Silicon	Total Lead Frame 7440-50-8 7440-02-0 7440-22-4 7440-21-3 7439-95-4	100.00 % of Total Weight 95.24 2.54 1.67 0.45	25.22
Nickel 7440- Silver 7440- Silicon 7440- Silicon 7440- Magnesium 7439- Silver 7440- Acrylic Resin Trade s Epoxy Resin Trade s Silicon 7440- Gold 7440- Tin 7440-	12-0 Lead Frame 12-4 Lead Frame 11-3 Lead Frame 15-4 Lead Frame 15-4 Die Attach scert Die Attach ecret Die Attach 11-3 Chip (Die) 17-5 Wire Bond) } }	0.641 0.421 0.113 0.025 1.155 0.210 0.135 2.900	2.359 1.550 0.418 0.093 4.254 0.773 0.497 10.681	6,406 4,209 1,135 252 11,550 2,100 1,350		Copper Nickel Silver Silicon	Lead Frame 7440-50-8 7440-02-0 7440-22-4 7440-21-3 7439-95-4	% of Total Weight 95.24 2.54 1.67 0.45	25.22
Silver 7440- Silicon 7440- Magnesium 7439- Silver 7440- Acrylic Resin Trade s Epoxy Resin Trade s Silicon 7440- Gold 7440- Tin 7440-	12-4 Lead Frame 1-1-3 Lead Frame 15-5 Lead Frame 12-4 Die Attach 12-4 Die Attach 1-1-3 Die Attach 1-1-3 Chip (Die) 17-5 Wire Bond))	0.421 0.113 0.025 1.155 0.210 0.135 2.900	1.550 0.418 0.093 4.254 0.773 0.497 10.681	4,209 1,135 252 11,550 2,100 1,350		Copper Nickel Silver Silicon	7440-50-8 7440-02-0 7440-22-4 7440-21-3 7439-95-4	95.24 2.54 1.67 0.45	25.22
Silicon 7440-/ Magnesium 7439-1 Silver 7440-/ Acrylic Resin Trade s Epoxy Resin Trade s Silicon 7440-/ Gold 7440-/ Tin 7440-/	17-3 Lead Frame 15-4 Lead Frame 12-4 Die Attach ecret Die Attach ecret Die Attach 11-3 Chip (Die) 77-5 Wire Bond	9	0.113 0.025 1.155 0.210 0.135 2.900	0.418 0.093 4.254 0.773 0.497 10.681	1,135 252 11,550 2,100 1,350	F.F.2	Nickel Silver Silicon	7440-02-0 7440-22-4 7440-21-3 7439-95-4	2.54 1.67 0.45	
Magnesium 7439- Silver 7440- Acrylic Resin Trades Epoxy Resin Trade s Silicon 7440- Gold 7440- Tin 7440-	15-4 Lead Frame 12-4 Die Attach secret Die Attach ecret Die Attach 11-3 Chip (Die) 17-5 Wire Bond	•	0.025 1.155 0.210 0.135 2.900	0.093 4.254 0.773 0.497 10.681	252 11,550 2,100 1,350	E 52	Silver Silicon	7440-22-4 7440-21-3 7439-95-4	1.67 0.45	
Silver 7440-1 Acrylic Resin Trade s Epoxy Resin Trade s Silicon 7440-1 Gold 7440-1 Tin 7440-1	12-4 Die Attach eeret Die Attach ecret Die Attach ecret Die Attach 21-3 Chip (Die) 57-5 Wire Bond		1.155 0.210 0.135 2.900	4.254 0.773 0.497 10.681	11,550 2,100 1,350	F F2	Silicon	7440-21-3 7439-95-4	0.45	
Acrylic Resin Trade s Epoxy Resin Trade s Silicon 7440- Gold 7440- Tin 7440-	ecret Die Attach ecret Die Attach 21-3 Chip (Die) 57-5 Wire Bond		0.210 0.135 2.900	0.773 0.497 10.681	2,100 1,350	5.52		7439-95-4		
Epoxy Resin Trade s Silicon 7440-2 Gold 7440-3 Tin 7440-3	ecret Die Attach 21-3 Chip (Die) 57-5 Wire Bond		0.135 2.900	0.497 10.681	1,350	E E2				
Silicon 7440-1 Gold 7440-1 Tin 7440-1	21-3 Chip (Die) 57-5 Wire Bond		2.900	10.681		E E2			100.00	
Gold 7440-5	7-5 Wire Bond						(mg) Total	Die Attach	% of Total Weight	1.5
Tin 7440-3					2,600	0.02	Silver	7440-22-4	77.00	
		annealed at 150°C for 1 hour	1.700	6.261	17.000		Acrylic Resin	Trade secret	14.00	i
		TOTALS:	100.000	368.300	1.000.000		Epoxy Resin	Trade secret	9.00	ii
	3683 g Total Mass				.,,		Epoxy (tooli)	Total	100.00	
ompliance with the above EU Directives has been verified via internal design a chemical substance is absent from the list above, the chemical substance icorporated's knowledge and belief as of the date of this document, there is in elow the threshold of regulatory concern for any regulatory scheme world-with.	is NOT an intentional ingredient in the se no credible reason to believe that the una	emiconductor device an					Doped Silicon	7440-21-3 Total	100.00	
elow me threshold of legislatory concern for any legislatory scheme with which folding compounds used by Microchip meet the UL94 V0 flammability standa ttp://ul.com/global/eng/pages/offerings/industries/chemicals/plastics/		TM family of databases	to obtain a test rep	ort at	-	0.96	(mg) Total	Wire Bond	% of Total Weight	0.26
he 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 eles" may be made from PVC plastic.							Gold	7440-57-5	100.00	
licrochip Technology Incorporated believes the information in this form conducting in Technology Incorporated believes the information in this form conducting materials is true and correct to the best of its knowledge and nd accuracy of data in this form because it has been compiled based on the rotected from disclosure as trade secrets and some information may not have if the average weight of these parts and the average weight of anticipated signaterials contained within silicon devices (silicon IC) in the finished parts.	belief, as of the date listed in this form. M ranges provided in Material Safety Data SI e been provided by subcontract assemble	licrochip Technology II heets provided by raw ers and raw material su	corporated cannot material suppliers. S opliers. Information	guarantee the Supplier inform is provided o	e completeness mation is often only as estimates	,		Total	100.00	
crochip Technology Incorporated does not provide any warranty, express or implied, with respect to the information provided in this declaration. The exclusive, limited product warranties 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 ler acknowledgement, and invoices.						6.26	(mg) Total	Plating on external leads (pins) - Matte Tin / annealed at 150°C for 1 hour	% of Total Weight	1.7
licrochip disclaims any duty to notify users of updates or changes to Materia uffered by users or third parties as a result of the users' reliance on the infor f Compliance for semiconductor products.							Tin	7440-31-5	100.00]
ssembled package referenced above is EU REACH compliant based on the la ttp://echa.europa.eu/web/guest/candidate-list-table	test SVHC candidate list of ECHA which of	can be found at						Total	100.00	

Au 16:18: 04/25/17