



Semiconductor Device Type: H4A 4 VDFN 3.2x2.5x0.9mm NiPdAu						Package Homogeneous Materials					
Basic Substance	CAS Number	*Contained In* Sub-Component	% Total Weight	mg/part	ppm	0.90	(mg) Total	Die 1 and 2	% of Total Weight	4.59	
Silicon	7440-21-3	Die 1 and 2	4.59	0.90	45944		Silicon	7440-21-3	100.00		
Copper	7440-50-8	Leadframe	32.53	6.38	325256		Total 100.00				
Zinc	7440-66-6	Leadframe	0.04	0.01	416						
Iron	7439-89-6	Leadframe	0.78	0.15	7841	6.55	(mg) Total	Leadframe	% of Total Weight	33.38	
Phosphorus	7723-14-0	Leadframe	0.03	0.01	289		Copper	7440-50-8	97.44		
Nickel	7440-02-0	Leadframe PPF	0.43	0.08	4330		Zinc	7440-66-6	0.12		
Palladium	7440-05-3	Leadframe PPF	0.02	0.00	166		Iron	7439-89-6	2.35		
Gold	7440-57-5	Leadframe PPF	0.01	0.00	100		Phosphorus	7723-14-0	0.09		
o-Cresol-epichlorohydrin-formaldehyde copolymer	29690-82-2	Die Attach Material 1	0.06	0.01	587		Total 100.00				
Formaldehyde, polymer with 2-(chloromethyl)oxirane and phenol	9003-36-5	Die Attach Material 1	0.12	0.02	1175	0.09	(mg) Total	Leadframe PPF	% of Total Weight	0.46	
Bisphenol A-formaldehyde copolymer	25085-75-0	Die Attach Material 1	0.12	0.02	1175		Nickel	7440-02-0	94.22		
Silica	7631-86-9	Die Attach Material 1	0.42	0.08	4196		Palladium	7440-05-3	3.61		
2-Propenoic acid, 2-methyl-, 2-oxiranylmethyl ester, polymer with butyl 2-propenoate, ethyl 2-propenoate and 2-propenenitrile	58152-79-7	Die Attach Material 1	0.13	0.02	1259		Gold	7440-57-5	2.17		
Silver	7440-22-4	Die Attach Material 2	1.02	0.20	10168		Total 100.00				
Epoxy Resin	Trade Secret	Die Attach Material 2	0.03	0.01	339	0.16	(mg) Total	Die Attach Material 1	% of Total Weight	0.84	
Cashew, nutshell liq. Polymer with epichlorohydrin	68413-24-1	Die Attach Material 2	0.03	0.01	339		o-Cresol-epichlorohydrin-formaldehyde copolymer	29690-82-2	7.00		
Toluene	108-88-3	Die Attach Material 2	0.03	0.01	339		Formaldehyde, polymer with 2-(chloromethyl)oxirane and phenol	9003-36-5	14.00		
2-Heptyl-3,4-bis(9-isocyanatononyl)-1-pentylcyclohexane	68239-06-5	Die Attach Material 2	0.01	0.00	56		Bisphenol A-formaldehyde copolymer	25085-75-0	14.00		
Bismaleimidodiphenylmethane	13676-54-5	Die Attach Material 2	0.01	0.00	56		Silica	7631-86-9	50.00		
Gold	7440-57-5	Bond Wire	0.56	0.11	5618		2-Propenoic acid, 2-methyl-, 2-oxiranylmethyl ester, polymer with butyl 2-propenoate, ethyl 2-propenoate and 2-propenenitrile	58152-79-7	15.00		
Impurities	Trade secret	Bond Wire	0.00	0.00	1		Total 100.00				
Epoxy Resin	Trade secret	Mold Compound	2.92	0.57	29203	0.22	(mg) Total	Die Attach Material 2	% of Total Weight	1.13	
Phenol Resin	Trade secret	Mold Compound	1.58	0.31	15770		Silver	7440-22-4	90.00		
Silica (Amorphous)A	60676-86-0	Mold Compound	50.81	9.97	508128		Epoxy Resin	Trade Secret	3.00		
Silica (Amorphous)B	7631-86-9	Mold Compound	2.92	0.57	29203		Cashew, nutshell liq. Polymer with epichlorohydrin	68413-24-1	3.00		
Carbon Black	1333-86-4	Mold Compound	0.18	0.03	1752		Toluene	108-88-3	3.00		
Glycol ether	Trade secret	Die Coating	0.16	0.03	1573		2-Heptyl-3,4-bis(9-isocyanatononyl)-1-pentylcyclohexane	68239-06-5	0.50		
Modified Rosin	Trade secret	Die Coating	0.44	0.09	4406		Bismaleimidodiphenylmethane	13676-54-5	0.50		
N-methyl-2-pyrrolidone	872-50-4	Die Coating	0.03	0.01	283		Total 100.00				
Halogenated organic diol	Trade secret	Die Coating	0.00	0.00	31		0.11	(mg) Total	Bond Wire	% of Total Weight	0.56
TOTALS: 19.61 mg Total Mass			100.00	19.61	1,000,000			Gold	7440-57-5	99.99	
The information contained in this Material Content Declaration (MCD) consists of package-level information and is not part number specific. This information is considered to be sufficiently representative of all part numbers for the package type.							Impurities	Trade secret	0.01		
						Total 100.00					
						11.45	(mg) Total	Mold Compound	% of Total Weight	58.41	
						Epoxy Resin	Trade secret	5.00			
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							Silica (Amorphous)A	60676-86-0	87.00		
							Silica (Amorphous)B	7631-86-9	5.00		
							Carbon Black	1333-86-4	0.30		
Microchip Technology Incorporated believes the information in this MCD 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 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. These estimates do not include trace levels of dopants, impurities, metals, and non-metallic materials which may be contained within silicon devices (silicon IC) or the finished parts.						Total 100.00					
						0.12	(mg) Total	Die Coating	% of Total Weight	0.63	
							Glycol ether	Trade secret	25.00		
							Modified Rosin	Trade secret	70.00		
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							Halogenated organic diol	Trade secret	0.50		
						Total 100.00					
						19.61	Total 100.00 100.00				