



Semiconductor Device Type: **HYC5 (D3A) 005 SC70 NiPdAu**

<b>Termination Base Alloy: Copper Alloy (Cu)</b>	<b>Package Homogeneous Materials: 8.1 Electronics (e.g. pc boards, displays)</b>	<b>J-STD-609A Product Marking and/or Pkg. Labeling e4</b>
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Basic Substance	CAS Number	"Contained In" Sub-Component	% Total Weight	mg/part	ppm
Silica, vitreous	60676-86-0	Mold Compound	46.725	2.944	467,245
Epoxy Resin	Trade Secret	Mold Compound	3.367	0.212	33,669
Phenolic Resin	Trade Secret	Mold Compound	3.367	0.212	33,669
Epoxy, Cresol Novolac	29690-82-2	Mold Compound	1.347	0.085	13,468
Carbon Black	1333-86-4	Mold Compound	0.165	0.010	1,649
Copper	7440-50-8	Lead Frame	39.747	2.504	397,471
Iron	7439-89-6	Lead Frame	0.940	0.059	9,396
Phosphorous	7723-14-0	Lead Frame	0.102	0.006	1,021
Zinc (Metal)	7440-66-0	Lead Frame	0.061	0.004	613
Silver (Ag)	7440-22-4	Die Attach	0.620	0.039	6,202
Proprietary Resin	Trade Secret	Die Attach	0.146	0.009	1,462
Proprietary Curing agent & Hardener	Trade Secret	Die Attach	0.024	0.001	237
Silicon	7440-21-3	Chip (Die)	1.420	0.089	14,200
Gold	7440-57-5	Wire Bond	0.130	0.008	1,300
Nickel	7440-02-0	Plating on external leads (pins)	1.656	0.104	16,560
Palladium	7440-05-3	Plating on external leads (pins)	0.092	0.006	920
Gold	7440-57-5	Plating on external leads (pins)	0.092	0.006	920
<b>TOTALS:</b>			<b>100.000</b>	<b>6.300</b>	<b>1,000,000</b>

**0.0063 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/offerings/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.

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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>

(mg) Total	Mold Compound	% of Total Weight	
3.46			54.97
<b>Total 100.00</b>			
2.57	Lead Frame	% of Total Weight	40.85
<b>Total 100.00</b>			
0.05	Die Attach	% of Total Weight	0.79
<b>Total 100.00</b>			
0.09	Chip (Die)	% of Total Weight	1.42
<b>Total 100.00</b>			
0.01	Wire Bond	% of Total Weight	0.13
<b>Total 100.00</b>			
0.12	Plating on external leads (pins)	% of Total Weight	1.84
<b>Total 100.00</b>			

6.30

100.00