16L-TSSOP
Pb-Free Package

PACKAGE MATERIAL DECLARATION DATASHEET

Cypress Package Code	ZZ	**Body Size (mil/mm)**	4.4 mm
Package Weight – Site 1	B1 : 49.6933 mg B2 : 59.9998 mg B3: 59.3970 mg	**Package Weight – Site 2**	B1: 50.7016 mg B2: 55.3092 mg B3: 63.4832 mg
Package weight – Site 3	62.0000 mg		

SUMMARY

The 16L-TSSOP package is qualified at three assembly sites. Packages from different assembly sites are likely to have different materials composition. However, Cypress guarantees that product ordered with a part number containing an "X" (e.g. CY7C1328G-133A**X**I, CY2308S**X**C-1HT) meets all requirement of the EU RoHS directive.

ASSEMBLY Site 1: Cypress Manufacturing Limited (CML)
Package Qualification Report # 060903, 115205, 124204 (Note 1)

I. DECLARATION OF PACKAGED UNITS

A. BANNED SUBSTANCES

Materials from Level A of the EIA/JIG/JGPSSI/EICTA Material Composition Declaration Guide and EU RoHS. Listed in the table below are materials that are neither contained nor intentionally added to this product.

Substances / Compounds	Weight by mg	PPM	Analysis Report (Note 2)
Cadmium and Cadmium Compounds	0	< 5.0	CoA-ZZ16-CML
Hexavalent Chromium and its Compounds	0	< 5.0	
Lead and Lead Compounds	0	< 5.0	
Mercury and Mercury Compounds	0	< 5.0	
Polybrominated Biphenyls (PBB)	0	< 5.0	
Polybrominated Diphenylethers (PBDE)	0	< 5.0	
Asbestos	0	0	As per MSDS
Azo colorants	0	0	As per MSDS
Ozone Depleting Substances	0	0	As per MSDS
Polychlorinated Biphenyls (PCBs)	0	0	As per MSDS
Polychlorinated Napthalenes	0	0	As per MSDS
Radioactive Substances	0	0	As per MSDS
Shortchain Chlorinated Paraffins	0	0	As per MSDS
Tributyl Tin (TBT) and Triphenyl Tin (TPT)	0	0	As per MSDS
Tributyl Tin Oxide (TBTO)	0	0	As per MSDS
Formaldehyde	0	0	As per MSDS

Note 1: Qualification reports are available at www.cypress.com. Access them by doing a Search on the Report #.
Note 2: Report available from Cypress Sales Offices or Distributors.
Note 3: Materials/substances not declared in Section I-A and I-B of this document are considered "non-existent in the product" or a natural impurity. In order to report exactly 100% material composition, some numbers were rounded to the nearest 0.01 percent. Cypress Semiconductor PMDD's are calculated using MSDS, Material Analysis Reports and Cypress Assembly site information.
Note 4: Actual testing performed on package family basis. Engineering calculations were applied to derive individual package data.

B1. MATERIAL COMPOSITION (Note 3)

NiPdAu using Standard Molding Compound

Material	Purpose of Use	Substance Composition	CAS Number	Weight by mg	% weight of substance per Homogeneous	PPM	%Weight of Substance per package
Leadframe	Base Material	Cu	7440-50-8	23.5978	94.4511%	474868	47.4868%
		Si	7440-21-3	0.2981	1.1933%	6000	0.6000%
		Mg	7439-95-4	0.0795	0.3182%	1600	0.1600%
		Ni	7440-02-0	1.0087	4.0374%	20299	2.0299%
Lead Finish	External Plating	Ni	7440-02-0	0.1930	96.5200%	3885	0.3885%
		Pd	7440-05-3	0.0035	1.7400%	70	0.0070%
		Au	7440-57-5	0.0035	1.7400%	70	0.0070%
Die Attach	Adhesive	Ag	7440-22-4	0.1687	79.9953%	3395	0.3395%
		Proprietary bismaleimide	----------	0.0211	9.9906%	424	0.0424%
		Proprietary polymer	----------	0.0084	4.0057%	170	0.0170%
		Methacrylate	----------	0.0042	2.0028%	85	0.0085%
		Acrylate ester	----------	0.0042	2.0028%	85	0.0085%
		Organic peroxide	----------	0.0042	2.0028%	85	0.0085%
Die	Circuit	Si	7440-21-3	2.9715	100.0000%	59796	5.9796%
Wire	Interconnect	Au	7440-57-5	0.6112	100.0000%	12299	1.2299%
Mold Compound	Encapsulation	Epoxy resin	85954-11-6	1.0385	5.0132%	20899	2.0899%
		Phenol resin	26834-02-6	1.0385	5.0132%	20899	2.0899%
		Brominated epoxy resin	68541-56-0	0.2087	1.0074%	4200	0.4200%
		Antimony trioxide	1309-64-4	0.0994	0.4797%	2000	0.2000%
		Silica	60676-86-0	18.1219	87.4790%	364675	36.4675%
		Others	----------	0.2087	1.0074%	4200	0.4200%
Package Weight (mg):				**49.6933**		**% Total:**	**100.0000**

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Note 2: Report available from Cypress Sales Offices or Distributors.
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Note 4: Actual testing performed on package family basis. Engineering calculations were applied to derive individual package data.

B2. MATERIAL COMPOSITION (Note 3)
NiPdAu using Green Molding Compound

Material	Purpose of Use	Substance Composition	CAS Number	Weight by mg	% Weight of Substance per Homogeneous Material	PPM	% Weight of Substance per package
Lead frame	Base Material	Cu	7440-50-8	26.3370	97.4100	438,950	43.8950
		Fe	7439-89-6	0.6489	2.4000	10,815	1.0815
		P	7723-14-0	0.0189	0.0700	315	0.0315
		Zn	7440-66-6	0.0324	0.1200	541	0.0541
Lead Finish	External Plating	Ni	7440-02-0	0.5432	96.5203	9,054	0.9054
		Pd	7440-05-3	0.0098	1.7370	163	0.0163
		Au	7440-57-5	0.0098	1.7427	163	0.0163
Die Attach	Adhesive	Ag	7440-22-4	0.0597	80.0000	996	0.0996
		Proprietary bismaleimide	----------	0.0067	9.0000	112	0.0112
		Proprietary polymer	----------	0.0037	5.0000	62	0.0062
		Methacrylate	----------	0.0015	2.0000	25	0.0025
		Acrylate ester	----------	0.0015	2.0000	25	0.0025
		Organic peroxide	----------	0.0015	2.0000	25	0.0025
Die	Circuit	Si	7440-21-3	1.0453	100.0000	17,422	1.7422
Wire	Interconnect	Au	7440-57-5	1.1295	100.0000	18,825	1.8825
Mold Compound	Encapsulation	SiO2	60676-86-0	26.8339	89.0000	447,232	44.7232
		Phenol Resin	----------	1.5075	5.0000	25,125	2.5125
		Epoxy Resin	----------	1.8090	6.0000	30,150	3.0150

Package Weight (mg): 59.9998 **%Total: 100.0000**

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Note 3: Materials/substances not declared in Section I-A and I-B of this document are considered "non-existent in the product" or a natural impurity. In order to report exactly 100% material composition, some numbers were rounded to the nearest 0.01 percent. Cypress Semiconductor PMDD's are calculated using MSDS, Material Analysis Reports and Cypress Assembly site information.
Note 4: Actual testing performed on package family basis. Engineering calculations were applied to derive individual package data.

B3. MATERIAL COMPOSITION (Note 3)
Copper Wire using NiPdAu and Kyocera Molding Compound

Material	Purpose of Use	Substance Composition	CAS Number	Weight by mg	% Weight of Substance per Homogeneous Material	PPM	% Weight of Substance per package
Lead frame	Base Material	Cu	7440-50-8	26.3370	97.4100	443,406	44.3406
		Fe	7439-89-6	0.6489	2.4000	10,925	1.0925
		P	7723-14-0	0.0189	0.0700	319	0.0319
		Zn	7440-66-6	0.0324	0.1200	546	0.0546
Lead Finish	External Plating	Ni	7440-02-0	0.5432	96.5200	9,145	0.9145
		Pd	7440-05-3	0.0098	1.7400	165	0.0165
		Au	7440-57-5	0.0098	1.7400	165	0.0165
Die Attach	Adhesive	Ag	7440-22-4	0.0597	80.0000	1,005	0.1005
		Proprietary bismaleimide	----------	0.0067	9.0000	113	0.0113
		Proprietary polymer	----------	0.0037	5.0000	63	0.0063
		Methacrylate	----------	0.0015	2.0000	25	0.0025
		Acrylate ester	----------	0.0015	2.0000	25	0.0025
		Organic peroxide	----------	0.0015	2.0000	25	0.0025
Die	Circuit	Si	7440-21-3	1.0453	100.0000	17,599	1.7599
Wire	Interconnect	Cu	7440-50-8	0.5267	100.0000	8,867	0.8867
Mold Compound	Encapsulation	SiO2	60676-86-0	26.8339	89.0000	451,771	45.1771
		Phenol Resin	----------	1.5075	5.0000	25,380	2.5380
		Epoxy Resin	----------	1.7336	5.7500	29,187	2.9187
		Carbon Black	1333-86-4	0.0754	0.2500	1,269	0.1269

Package Weight (mg): 59.3970 **%Total: 100.0000**

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Note 4: Actual testing performed on package family basis. Engineering calculations were applied to derive individual package data.

II. DECLARATION OF PACKAGING INDIRECT MATERIALS

Type	Material	Lead PPM	Cadmium PPM	Cr VI PPM	Mercury PPM	PBB PPM	PBDE PPM	Analysis Report (Note2)
Tube	Plastic Tube	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	CoA-PLTB-R
	End Plug	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	CoA-EPLG-R
Tape and Reel	Carrier Tape	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	CoA-CART-R
Others	Moisture Barrier Bag	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	CoA-MBBG-R
	Dessicant	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	CoA-DESS-R
	HIC	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	CoA-HIC-R
	Bubble Pack	<5.0	<5.0	<5.0	<5.0	<10.0	<10.0	CoA-BUBB-R
	Carton Label	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	CoA-CRTN-R
	Inner Label	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	CoA-LBL-R
	Shielding Bag	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	CoA-SBAG-R

Note 1: Qualification reports are available at www.cypress.com. Access them by doing a Search on the Report #.
Note 2: Report available from Cypress Sales Offices or Distributors.
Note 3: Materials/substances not declared in Section I-A and I-B of this document are considered "non-existent in the product" or a natural impurity. In order to report exactly 100% material composition, some numbers were rounded to the nearest 0.01 percent. Cypress Semiconductor PMDD's are calculated using MSDS, Material Analysis Reports and Cypress Assembly site information.
Note 4: Actual testing performed on package family basis. Engineering calculations were applied to derive individual package data.

ASSEMBLY Site 2: Orient Semiconductor Electronics Taiwan (OSET)
Package Qualification Report # 043102, # 111405, # 120605 (Note 1)

I. DECLARATION OF PACKAGED UNITS

A. BANNED SUBSTANCES

Materials from Level A of the EIA/JIG/JGPSSI/EICTA Material Composition Declaration Guide and EU RoHS. Listed in the table below are materials that are neither contained nor intentionally added to this product.

Substances / Compounds	Weight by mg	PPM	Analysis Report (Note 2)
Cadmium and Cadmium Compounds	0	< 5.0	CoA-ZZ16-OSET
Hexavalent Chromium and its Compounds	0	< 5.0	
Lead and Lead Compounds	0	< 5.0	
Mercury and Mercury Compounds	0	< 5.0	
Polybrominated Biphenyls (PBB)	0	< 5.0	
Polybrominated Diphenylethers (PBDE)	0	< 5.0	
Asbestos	0	0	As per MSDS
Azo colorants	0	0	As per MSDS
Ozone Depleting Substances	0	0	As per MSDS
Polychlorinated Biphenyls (PCBs)	0	0	As per MSDS
Polychlorinated Napthalenes	0	0	As per MSDS
Radioactive Substances	0	0	As per MSDS
Shortchain Chlorinated Paraffins	0	0	As per MSDS
Tributyl Tin (TBT) and Triphenyl Tin (TPT)	0	0	As per MSDS
Tributyl Tin Oxide (TBTO)	0	0	As per MSDS
Formaldehyde	0	0	As per MSDS

Note 1: Qualification reports are available at www.cypress.com. Access them by doing a Search on the Report #.
Note 2: Report available from Cypress Sales Offices or Distributors.
Note 3: Materials/substances not declared in Section I-A and I-B of this document are considered "non-existent in the product" or a natural impurity. In order to report exactly 100% material composition, some numbers were rounded to the nearest 0.01 percent. Cypress Semiconductor PMDD's are calculated using MSDS, Material Analysis Reports and Cypress Assembly site information.
Note 4: Actual testing performed on package family basis. Engineering calculations were applied to derive individual package data.

B1. MATERIAL COMPOSITION (Note 3)
Pure Sn using Hitachi Mold Compound

Material	Purpose of Use	Substance Composition	CAS Number	Weight by mg	% weight of substance per Homogeneous	PPM	% Weight of Substance per package
Leadframe	Base Material	Cu	7440-50-8	14.8706	93.8800%	294,063	29.4063%
		Si	7440-21-3	0.1901	1.2000%	3,759	0.3759%
		Mg	7439-95-4	0.0507	0.3200%	1,002	0.1002%
		Ag	7440-22-4	0.0602	0.3800%	1,190	0.1190%
		Ni	7440-02-0	0.6700	4.2300%	13,250	1.3250%
Lead Finish	External Plating	Sn	7440-31-5	1.3000	100.0000%	25,707	2.5707%
Die Attach	Adhesive	Epoxy resin	----------	0.1600	20.2500%	3,163	0.3163%
		Ag	7440-22-4	0.5900	74.6800%	11,667	1.1667%
		Metal	----------	0.0400	5.0600%	790	0.0790%
Die	Circuit	Si	7440-21-3	1.8700	100.0000%	36,979	3.6979%
Wire	Interconnect	Au	7440-57-5	0.1700	100.0000%	3,362	0.3362%
Mold Compound	Encapsulation	Epoxy resin	85954-11-6	1.5365	5.0000%	30,323	3.0323%
		Phenol resin	26834-02-6	1.2292	4.0000%	24,246	2.4246%
		Aromatic Phosphate	----------	0.3073	1.0000%	6,077	0.6077%
		Carbon black	1333-86-4	0.0615	0.2000%	1,155	0.1155%
		Silica	60676-86-0	27.5955	89.8000%	543,266	54.3266%

Package Weight (mg): 50.7016 **% Total: 100.0000**

Note 1: Qualification reports are available at www.cypress.com. Access them by doing a Search on the Report #.
Note 2: Report available from Cypress Sales Offices or Distributors.
Note 3: Materials/substances not declared in Section I-A and I-B of this document are considered "non-existent in the product" or a natural impurity. In order to report exactly 100% material composition, some numbers were rounded to the nearest 0.01 percent. Cypress Semiconductor PMDD's are calculated using MSDS, Material Analysis Reports and Cypress Assembly site information.
Note 4: Actual testing performed on package family basis. Engineering calculations were applied to derive individual package data.

B2. MATERIAL COMPOSITION (Note 3)
Pure Sn using Sumitomo Mold Compound

Material	Purpose of Use	Substance Composition	CAS Number	Weight by mg	% weight of substance per Homogeneous	PPM	% Weight of Substance per package
Leadframe	Base Material	Copper	7440-50-8	18.6173	95.5000%	336605	33.6605%
		Silicon	7440-21-3	0.1413	0.7250%	2555	0.2555%
		Nickel	7440-02-0	0.6238	3.2000%	11279	1.1279%
		Magnesium	7439-95-4	0.0341	0.1750%	617	0.0617%
		Silver	7440-22-4	0.0780	0.4000%	1410	0.1410%
Lead Finish	External Plating	Sn	7440-31-5	1.5280	100.0000%	27627	2.7627%
Die Attach	Adhesive	Silver Flake	7440-22-4	0.2175	79.0000%	3932	0.3932%
		Epoxy Acrylate	15625-89-5	0.0206	7.5000%	373	0.0373%
		Substituted Polyamine	68490-66-4	0.0028	1.0000%	50	0.0050%
		Bisphenol F	28064-14-4	0.0206	7.5000%	373	0.0373%
		2-Ethylhexyl Glycidyl Ether	2461-15-6	0.0138	5.0000%	249	0.0249%
Die	Circuit	Si	7440-21-3	3.2073	100.0000%	57989	5.7989%
Wire	Interconnect	Au	7440-57-5	0.3322	100.0000%	6006	0.6006%
Mold Compound	Encapsulation	Epoxy resin A	Trade Secret	1.5236	5.0000%	27547	2.7547%
		Epoxy,Cresol Novolac	29690-82-2	1.5236	5.0000%	27547	2.7547%
		Phenol resin	Trade Secret	1.5236	5.0000%	27547	2.7547%
		Metal Hydroxide	Trade Secret	1.5236	5.0000%	27547	2.7547%
		Carbon Black	1333-86-4	0.0914	0.3000%	1653	0.1653%
		Silica Fused	60676-86-0	21.1474	69.4000%	382349	38.2349%
		Silica Fused	76361-86-9	3.0472	10.0000%	55094	5.5094%
		Silica,crystalline	14808-60-7	0.0914	0.3000%	1653	0.1653%

Package Weight (mg): 55.3092 **% Total: 100.0000**

Note 1: Qualification reports are available at www.cypress.com. Access them by doing a Search on the Report #.
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Note 4: Actual testing performed on package family basis. Engineering calculations were applied to derive individual package data.

B3: MATERIAL COMPOSITION (Note 3)
Using Copper Wire

Material	Purpose of Use	Substance Composition	CAS Number	Weight by mg	% weight of substance per Homogeneous	PPM	% Weight of Substance per package
Leadframe	Base Material	Copper	7440-50-8	18.7419	95.5000%	295,226	29.5226%
		Silicon	7440-21-3	0.1423	0.7250%	2,242	0.2242%
		Nickel	7440-02-0	0.6280	3.2000%	9,892	0.9892%
		Magnesium	7439-95-4	0.0343	0.1750%	540	0.0540%
		Silver	7440-22-4	0.0785	0.4000%	1,237	0.1237%
Lead Finish	External Plating	Sn	7440-31-5	1.4821	100.0000%	23,346	2.3346%
Die Attach	Adhesive	Silver	7440-22-4	0.1253	74.0000%	1,974	0.1974%
		Epoxy resin A	9003-36-5	0.0068	4.0000%	107	0.0107%
		Epoxy resin B	Trade Secret	0.0102	6.0000%	161	0.0161%
		Diluent A	Trade Secret	0.0068	4.0000%	107	0.0107%
		Diluent B	Trade Secret	0.0102	6.0000%	161	0.0161%
		Phenolic Hardener	Trade Secret	0.0085	5.0000%	134	0.0134%
		Dicyandiamide	461-58-5	0.0008	0.5000%	13	0.0013%
		Organic peroxide	Trade Secret	0.0008	0.5000%	13	0.0013%
Die	Circuit	Si	7440-21-3	2.8922	100.0000%	45,559	4.5559%
Wire	Interconnect	Copper	7440-50-8	0.1106	100.0000%	1,742	0.1742%
Mold Compound	Encapsulation	Epoxy resin A	Trade Secret	1.9602	5.0000%	30,877	3.0877%
		Epoxy,Cresol Novolac	29690-82-2	1.9602	5.0000%	30,877	3.0877%
		Phenol resin	Trade Secret	1.9602	5.0000%	30,877	3.0877%
		Metal Hydroxide	Trade Secret	1.9602	5.0000%	30,877	3.0877%
		Carbon Black	1333-86-4	0.1176	0.3000%	1,852	0.1852%
		Silica Fused A	60676-86-0	27.2075	69.4000%	428,579	42.8579%
		Silica Fused B	76361-86-9	3.9204	10.0000%	61,755	6.1755%
		Silica,crystalline	14808-60-7	0.1176	0.3000%	1,852	0.1852%

Package Weight (mg): 63.4832 **% Total: 100.0000**

Note 1: Qualification reports are available at www.cypress.com. Access them by doing a Search on the Report #.
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Note 4: Actual testing performed on package family basis. Engineering calculations were applied to derive individual package data.

II. DECLARATION OF PACKAGING INDIRECT MATERIALS

Type	Material	Lead PPM	Cadmium PPM	Cr VI PPM	Mercury PPM	PBB PPM	PBDE PPM	Analysis Report (Note2)
Tube	Plastic Tube	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	CoA-PLTB-R
	End Plug	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	CoA-EPLG-R
Tape and Reel	Carrier Tape	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	CoA-CART-R
Others	Moisture Barrier Bag	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	CoA-MBBG-R
	Dessicant	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	CoA-DESS-R
	HIC	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	CoA-HIC-R
	Bubble Pack	<5.0	<5.0	<5.0	<5.0	<10.0	<10.0	CoA-BUBB-R
	Carton Label	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	CoA-CRTN-R
	Inner Label	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	CoA-LBL-R
	Shielding Bag	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	CoA-SBAG-R

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Note 4: Actual testing performed on package family basis. Engineering calculations were applied to derive individual package data.

ASSEMBLY Site 3: Amkor Technology Philippines (P1/P2)
Package Qualification Report # 032101 (Note 1)

I. DECLARATION OF PACKAGED UNITS

A. BANNED SUBSTANCES

Materials from Level A of the EIA/JIG/JGPSSI/EICTA Material Composition Declaration Guide and EU RoHS. Listed in the table below are materials that are neither contained nor intentionally added to this product.

Substances / Compounds	Weight by mg	PPM	Analysis Report (Note 2)
Cadmium and Cadmium Compounds	0	< 5.0	CoA-ZZ16-Amkor Philippines (P1/P2)
Hexavalent Chromium and its Compounds	0	< 5.0	
Lead and Lead Compounds	0	< 5.0	
Mercury and Mercury Compounds	0	< 5.0	
Polybrominated Biphenyls (PBB)	0	< 5.0	
Polybrominated Diphenylethers (PBDE)	0	< 5.0	
Asbestos	0	0	As per MSDS
Azo colorants	0	0	As per MSDS
Ozone Depleting Substances	0	0	As per MSDS
Polychlorinated Biphenyls (PCBs)	0	0	As per MSDS
Polychlorinated Napthalenes	0	0	As per MSDS
Radioactive Substances	0	0	As per MSDS
Shortchain Chlorinated Paraffins	0	0	As per MSDS
Tributyl Tin (TBT) and Triphenyl Tin (TPT)	0	0	As per MSDS
Tributyl Tin Oxide (TBTO)	0	0	As per MSDS
Formaldehyde	0	0	As per MSDS

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B. MATERIAL COMPOSITION (Note 3)

Material	Purpose of Use	Substance Composition	CAS Number	Weight by mg	% weight of substance per Homogeneous	PPM	%% Weight of Substance per package
Leadframe	Base Material	Cu	7440-50-8	26.4196	94.0200%	426,123	42.6123%
		Ni	7440-02-0	0.8205	2.9200%	13,234	1.3234%
		Si	7440-21-3	0.1798	0.6400%	2,901	0.2901%
		Mg	7439-95-4	0.0393	0.1400%	635	0.0635%
		Ag	7440-22-4	0.6407	2.2800%	10,334	1.0334%
Lead Finish	External Plating	Sn	7440-31-5	1.5700	100.0000%	25,323	2.5323%
Die Attach	Adhesive	Resin	----------	0.2700	20.6100%	4,355	0.4355%
		Ag	7440-22-4	0.9201	70.2400%	14,841	1.4841%
		Metal Oxide	----------	0.0400	3.0500%	644	0.0644%
		Amine	----------	0.0400	3.0500%	644	0.0644%
		Gamma Butyrolactone	----------	0.0400	3.0500%	644	0.0644%
Die	Circuit	Si	7440-21-3	3.8700	100.0000%	62,419	6.2419%
Wire	Interconnect	Au	7440-57-5	0.4000	100.0000%	6,452	0.6452%
Mold Compound	Encapsulation	Filler	----------	22.4700	84.0000%	362,419	36.2419%
		Phenol Resin	----------	1.8591	6.9500%	29,986	2.9986%
		Epoxy Resin	----------	2.4209	9.0500%	39,046	3.9046%

Package Weight (mg): 62.0000 **% Total: 100.0000**

II. DECLARATION OF PACKAGING INDIRECT MATERIALS

Type	Material	Lead PPM	Cadmium PPM	Cr VI PPM	Mercury PPM	PBB PPM	PBDE PPM	Analysis Report (Note2)
Tube	Plastic Tube	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	CoA-PLTB-R
	End Plug	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	CoA-EPLG-R
Tape and Reel	Carrier Tape	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	CoA-CART-R
Others	Moisture Barrier Bag	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	CoA-MBBG-R
	Dessicant	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	CoA-DESS-R
	HIC	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	CoA-HIC-R
	Bubble Pack	<5.0	<5.0	<5.0	<5.0	<10.0	<10.0	CoA-BUBB-R
	Carton Label	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	CoA-CRTN-R
	Inner Label	<10.0	<5.0	<5.0	<5.0	<5.0	<5.0	CoA-LBL-R
	Shielding Bag	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	CoA-SBAG-R

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Document History Page

Document Title: 16L TSSOP PB-FREE PACKAGE MATERIAL DECLARATION DATASHEET
Document Number: 001-04165

Rev.	ECN No.	Orig. of Change	Description of Change
**	390637	YXP	New document.
*A	401531	GFJ	Added assembly site 3. Added Package weight and word “PMDD”. Change the word from two to three in summary of qualified assembly sites. Added natural impurity in note 3 and added note 4.
*B	1350126	MRB	1. Updated Cypress Logo 2. Deleted reference QTP # 015107 and change to QTP # 060903 on Assembly site 1. 3. Deleted CoA-SP28-T and change to CoA-ZZ16-T on Assembly site 2. 4. Added the percent weight per homogeneous material and weight of substance on the material composition 5. Deleted Declaration of Packaging/Indirect Materials on Assembly site 1 and 2. 6. Updated and added Lead, Cr+VI, PBB and PBDE on the Declaration of Packaging/Indirect Materials.
*C	2616718	MAHA	Deleted the following items from Table B. Material Composition of Assembly Site 2: 1. Antimony and its compounds 2. Bromine organic compound 3. Organic phosphorous compound (Catalyst) Revised the following items from Table B. Material Composition of Assembly Site 2: 1. PPM 2. % Weight of Substance per Package
*D	2732541	HLR	Changed the reference QTP No. 024701 to 043102 for Assembly Site 2.
*E	3044455	MAHA	Deleted Fe and Zn from the material composition of assembly site 1. Revised the % weight of substance per Homogeneous values of the lead frame of assembly site 1. Revised the PPM and %Weight of Substance per package values of assembly site 1.
*F	3331862	HLR	Recomputed material composition table of assembly site 1.
*G	3377033	EBZ	Added package weight B2 for Site 2. Added QTP#111405 for Assembly Site- 2. Added B2: Material Composition table for Site-2.
*H	3615449	HLR	Added material composition using Green Mold Compound on Assembly Site 1. Reference QTP No. 115205. Added Table 2 for Assembly Sites 1 and 2. Updated the material composition of Assembly Site 2 – B1 and Assembly Site 3 to reflect 4 decimal places on values.
*I	3607050	COPI	Added PMDD for Assembly Site 2-B3 – OSE Taiwan Copper Qualification under QTP # 120605.

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Rev.	ECN No.	Orig. of Change	Description of Change
*J	3931592	UDR	Added B3 for Assembly Site 1 – CML-Autoline Copper Qualification under QTP # 124204. Added QTP # 124204 at Assembly Site 1 Package Qualification Reports Added B3. Material Composition – Using Copper Wire with NiPdAu and Kyocera mold Compound.
*K	4066912	YUM	Added assembly site name in the Assembly heading in site 1, 2 and 3. Changed assembly code to assembly site name in site 1, 2 and 3.

Distribution: WEB

Posting: None

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