

PACKAGE MATERIAL DECLARATION DATASHEET

Cypress Package Code	JZ	Body Size (mil/mm)	450x550 mil
Package Weight – Site 1	1,384.0000 mg	Package Weight – Site 2	1212.5000 mg

SUMMARY

The 32L-PLCC Pb-Free package is compliant to RoHS. Cypress Ordering Part Numbers containing an “X” (e.g. CY7C1328G-133AXI, CY2308SXC-1HT) meet the Directive 2002/95/EC (RoHS) requirement.

ASSEMBLY Site 1: Amkor Technology Philippines
Package Qualification Report # 034601/111501 (Note 1)

I. DECLARATION OF PACKAGED UNITS

II. 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-JZ32-Amkor Philippines
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 Naphthalenes	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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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”. In order to report exactly 100% material composition, some numbers were rounded to the nearest 0.01 percent. Cypress Semiconductor material information are calculated using MSDS, Material Analysis Reports and Cypress Assembly sites information.

B. MATERIAL COMPOSITION (Note 3)

Material	Purpose of Use	Substance Composition	CAS Number	Weight by mg	% weight of substance per Homogenous material	PPM	% weight of substance per package
Leadframe	Base Material	Cu	7440-50-8	329.0100	97.5200	237,724	23.7724%
		Fe	7439-89-6	7.7600	2.3000	5,607	0.5607%
		P	7723-14-0	0.1000	0.0300	72	0.0072%
		Zn	7440-66-6	0.5100	0.1500	368	0.0368%
Lead Finish	External Plating	Sn	7440-31-5	16.1500	100.0000	11,670	1.1670%
Die Attach	Adhesive	Resin	-----	0.0700	6.6000	54	0.0054%
		Ag	7440-22-4	0.7500	70.7500	539	0.0539%
		Mixed aryl allyl glycidyl compounds	-----	0.0300	2.8300	23	0.0023%
		Amine	-----	0.0500	4.7200	38	0.0038%
		Gamma Butyrolactone	96-48-0	0.0500	4.7200	38	0.0038%
		Diglycidylether of bisphenol-F	-----	0.1100	10.3800	77	0.0077%
Die	Circuit	Si	7440-21-3	3.7000	100.0000	2,676	0.2676%
Wire	Interconnect	Au	7440-57-5	1.0100	100.0000	732	0.0732%
Mold Compound	Encapsulation	Multi-aromatic resin	-----	76.8500	7.5000	55,530	5.5530%
		SiO ₂	60676-86-0	881.2500	86.0000	636,742	63.6742%
		Carbon black	1333-86-4	5.1200	0.5000	3,702	0.3702%
		Cresol Novolac Epoxy	-----	20.4900	2.0000	14,808	1.4808%
		Phenol resin	26834-02-6	40.9900	4.0000	29,600	2.9600%

Package Weight (mg): **1,384.0000**
% 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)
Tape & Reel	Cover tape	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	CoA-COVT-R
	Carrier tape	<5.0	<5.0	<5.0	<10.0	<50.0	<45.0	CoA-CART-R
	Plastic Reel	<5.0	<5.0	<5.0	<10.0	<50.0	<45.0	CoA-PLRL-R
Tube	Plastic Tube	<2.0	<2.0	<2.0	<2.0	<0.0005	<0.0005	CoA-PLTB-R
	End Plug	<2.0	<2.0	<2.0	<2.0	<0.0005	<0.0005	CoA-EPLUG-R
Others	Shielding bag	<2.0	<2.0	<2.0	<2.0	<5.0	<5.0	CoA-SBAG -R CoA-SBAG -M

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ASSEMBLY Site 2: Millennium Microtech Thailand (MMT)
Package Qualification Report # 113309 (See 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-JZ28-MMT
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 Homogenous material	PPM	% weight of substance per package
Leadframe	Base Material	Cu	7440-50-8	299.6850	99.8950	247,163	24.7163%
		Mn	7439-96-5	0.0150	0.0050	12	0.0012%
		Zn	7440-20-0	0.3000	0.1000	247	0.0247%
Lead Finish	External Plating	Sn	7440-31-5	200.0000	100.0000	164,948	16.4948%
Die Attach	Adhesive	Ag	7440-22-4	63.6000	79.5000	52,454	5.2454%
		Aromatic Amine	Proprietary	4.4000	5.5000	3,629	0.3629%
		Epoxy Resin	Proprietary	12.0000	15.0000	9,897	0.9897%
Die	Circuit	Si	7440-21-3	100.0000	100.0000	82,474	8.2474%
Wire	Interconnect	Au	7440-57-5	32.5000	100.0000	26,804	2.6804%
Mold Compound	Encapsulation	Silica Fused	60676-86-0	438.5000	87.7000	361,650	36.1650%
		Epoxy Resin	Proprietary	25.0000	5.0000	20,619	2.0619%
		Cresol Novolac Epoxy	29690-82-2	10.0000	2.0000	8,247	0.8247%
		Phenol resin	Proprietary	25.0000	5.0000	20,619	2.0619%
		Carbon black	1333-86-4	1.5000	0.3000	1,237	0.1237%

Package Weight (mg): **1,212.5000**
% 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)
Tape & Reel	Cover tape	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	CoA-COVT-R
	Carrier tape	<5.0	< 5.0	<5.0	<10.0	<50.0	<45.0	CoA-CART-R
	Plastic Reel	< 5.0	< 5.0	< 5.0	< 10.0	<50.0	<45.0	CoA-PLRL-R
Tube	Plastic Tube	<2.0	<2.0	<2.0	<2.0	<0.0005	<0.0005	CoA-PLTB-R
	End Plug	<2.0	<2.0	<2.0	<2.0	<0.0005	<0.0005	CoA-EPLUG-R
Others	Shielding bag	<2.0	<2.0	<2.0	<2.0	<5.0	<5.0	CoA-SBAG -R CoA-SBAG -X

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Document History Page

Document Title: 32L - PLCC PB-FREE PACKAGE MATERIAL DECLARATION DATASHEET
Document Number: 001-04292

Rev.	ECN No.	Orig. of Change	Description of Change
**	390462	YXP	New document.
*A	391923	YXP	Revised section II of the document to reflect both Amkor and CML's indirect materials, where applicable.
*B	596943	HLR	Change Cypress Logo. Add % weight of substance per Homogenous Material and % weight of substance per package on the Material Composition. Removed Ca and Ag on the material composition table under Goldwire material. Complete the RoHS Substances namely; Lead Cadmium, Mercury, Chromium VI, PBB and PBDE on Declaration of Packaging Indirect Materials table. Removed the following Indirect materials such as moisture barrier bag, protective band, shipping and inner/pizza box.
*C	3262214	ZJL	Added QTP # 111501 as additional QTP reference on assembly site 1 title. Updated material composition on section I to incorporate change in leadframe base material.
		Dcon	Replaced inactive bookset CML with WEB in distribution.
*D	3453203	ZJL	Added PMDD for site 2 – MMT (X) as another approved assembly site for JZ32 package. Align site 1 PMDD to 4 decimal places.
*E	3855071	JARG	Changed Document Title from 32L - PLCC Pb-Free PMDD to 32L - PLCC PB-FREE PACKAGE MATERIAL DECLARATION DATASHEET
*F	4033421	YUM	Added Assembly Site name in the Assembly heading. Changed Assembly Code to Assembly Site Name. Removed Tray and End Pin in the Indirect Materials Section.

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Distribution: WEB

Posting: None

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