



# Material Composition Declaration

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This document is a declaration of the substances within the manufacturer listed item. Note: if the item is an assembly with lower level parts, the declaration encompasses all lower level materials for which the manufacturer has engineering responsibility.

Adobe Reader version 7.0.5 is required to complete this declaration.

1752-2 1.1	IPC Web Site for Information on IPC-1752 Standard <a href="http://www.ipc.org/IPC-175x">http://www.ipc.org/IPC-175x</a>	Form Type * Distribute	Declaration Class * Class 6 - RoHS Yes/No, Homogeneous Materials and Mfg Informat
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## Supplier Information

Company Name *	Company Unique ID	Unique ID Authority	Response Date *	Response Document ID				
Mindspeed Technologies Inc	N/A	N/A	2013-03-22					
Contact Name *	Title - Contact	Phone - Contact *	Email - Contact *					
Cynthia Ong	Program Manager	949-579-5515	cynthia.ong@mindspeed.com					
Authorized Representative *	Title - Representative	Phone - Representative *	Email - Representative *	Supplier Comments or URL for Additional Information				
Amy Teng	Quality Engineer	604-6328114	amy.teng@mindspeed.com					
Requester Item Number	Mfr Item Number	Mfr Item Name	Effective Date	Version	Manufacturing Site	Weight *	UOM	Unit Type
M21131G-12	M21131G-12	35FCBGA 1156	2010-11-18	E	ASE, Taiwan	19,242.2	mg	EACH
Alternate Recommendation		NA		Alternate Item Comments	NA			

## Manufacturing Process Information

Terminal Plating / Grid Array Material	Terminal Base Alloy	J-STD-020 MSL Rating	Peak Process Body Temperature	Max Time at Peak Temperature	Number of Reflow Cycles
SAC 305	N/A	5	245 C	40 seconds	3
Comments					
N/A					

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## RoHS Material Composition Declaration

Declaration Type \*

Simplified

**RoHS Directive 2002/95/EC** **RoHS Definition:** Quantity limit of 0.1% by mass (1000 PPM) in homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE) and quantity limit of 0.01% by mass (100 PPM) of homogeneous material for Cadmium

Supplier certifies that it gathered the information it provides in this form concerning RoHS restrictive substances using appropriate methods to ensure its accuracy and that such information is true and correct to the best of its knowledge and belief, as of the date that Supplier completes this form. Supplier acknowledges that Company will rely on this certification in determining the compliance of its products with European Union member state laws that implement the RoHS Directive. Company acknowledges that Supplier may have relied on information provided by others in completing this form, and that Supplier may not have independently verified such information. However, in situations where Supplier has not independently verified information provided by others, Supplier agrees that, at a minimum, its suppliers have provided certifications regarding their contributions to the part, and those certifications are at least as comprehensive as the certification in this paragraph. If the Company and the Supplier enter into a written agreement with respect to the identified part, the terms and conditions of that agreement, including any warranty rights and or remedies provided as part of that agreement, will be the sole and exclusive source of the Supplier's liability and the Company's remedies for issues that arise regarding information the Supplier provides in this form.

**RoHS Declaration \*** 4 - Item(s) does not contain RoHS restricted substances per the definition above except for selected exemptions

**Supplier Acceptance \*** Accepted

**Exemptions:** If the declared item does not contain RoHS restricted substances per the definition above except for defined RoHS exemptions, then select the corresponding response in the RoHS Declaration above and choose all applicable exemptions.

Exemption List Version EL-2006/690/EC

15. Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.

## Declaration Signature

**Instructions:** Complete all of the required fields on all pages of this form. Select the "Accepted" on the Supplier Acceptance drop-down. This will display the signature area. Digitally sign the declaration (if required by the Requester) and click on Submit Form to have the form returned to the Requester.

Supplier Digital Signature

## Homogeneous Material Composition Declaration for Electronic Products

**SubItem Instructions:** The presence of any JIG Level A or B substances must be declared. [1] indicate the subpart in which the substance is located, [2] provide a description of the homogeneous material [3], enter the weight of the homogeneous material.

**Substance Instructions:** [A] select the Level (JIG A, JIG B, Requester or Supplier) [B] select the substance category (JIG or Requester) or enter a value (Supplier). [C] select the substance (JIG) or enter the substance and CAS (Other). [D] select a RoHS exemption, if applicable [E] enter the weight of the substance or the PPM concentration [F] Optionally enter the positive (+) and negative (-) tolerance in percent (Note: percent tolerance values are expected to cover a 3 sigma range of distribution unless otherwise noted).

**Line Functions:** +I Inserts a New Item /SubItem +M Inserts a new Material +C Inserts a new Substance Category +S Inserts a new Substance - Deletes the element line

Item/SubItem Name	Homogeneous Material	Weight	Unit of Measure	Level	Substance Category	Substance	CAS	Exempt	Weight	Unit of Measure	Tolerance		PPM
											-	+	
M21131G-12	Substrate	8,850.33	mg	C	GROUP-C	Nickel	65997-17-3		643.95	mg			72,759
				C	GROUP-C	Strontium oxide	64742-94-5		2.74	mg			309.59
				A	Lead/Lead Compound	Boron oxide	7439-92-1		1.89	mg			213.55
				C	GROUP-C	Zirconium oxide	Trade Secret		219.44	mg			24,794
				C	GROUP-C	Aluminum oxide	7440-31-5		3.22	mg			363.82
				C	GROUP-C	Palladium	67762-90-7		3.75	mg			423.71
				C	GROUP-C	Phosphorous	26265-08-7		482.96	mg			54,569
				C	GROUP-C	Copper	Trade Secret		3.75	mg			423.71
				C	GROUP-C	Copper oxide	Trade Secret		5	mg			564.95
				C	GROUP-C	Silicon dioxide	7440-50-8		1,199.02	mg			135,47
						Calcium oxide	68-12-2		2.74	mg			142.39
				C	GROUP-C	Chromium oxide	25068-38-6		53.15	mg			6,005.4
				C	GROUP-C	Thallium	Trade Secret		21.66	mg			2,447.3
				C	GROUP-C	Gold	Trade Secret		0.68	mg			76.833
						Barium oxide	108-94-1		13.71	mg			712.49
TIM		120	mg	C	GROUP-C	Zinc Oxide	1314-13-2		42	mg			349,99
				C	GROUP-C	Resin	Trade Secret		78	mg			649,99
Underfill		42	mg	C	GROUP-C	Organic acid anhydride	Trade Secret		8.4	mg			199,99
				C	GROUP-C	Carbon black	1333-86-4		0.42	mg			9,999.9
				C	GROUP-C	Phenolic resin	9003-35-4		0.84	mg			19,999
				C	GROUP-C	Bisphenol A type liquid	25068-38-6		1.26	mg			29,999
				C	GROUP-C	Silicon dioxide	60676-86-0		21	mg			499,99
				C	GROUP-C	Amine type accelerator	Trade Secret		0.84	mg			19,999

				C	GROUP-C		1,6-Bis(2,3-epoxypropox	27610-48-6		8.4	mg			199,99
				C	GROUP-C		Additives	Trade Secret		0.84	mg			19,999
Die	386.83	mg		C	GROUP-C		Silicon	7440-21-3		386.83	mg			999,99
Heatslug	5,395.96	mg		B	Nickel/Nickel Compou		Nickel	7440-02-0		32.37576	mg			1,682.5
				C	GROUP-C		Chrome	Trade Secret		2.69798	mg			500
				C	GROUP-C		Copper	7440-50-8		5,360.888	mg			993,49
Solder Ball	1,017.78	mg		C	GROUP-C		Ag	7440-22-4		40.7112	mg			40,000
				C	GROUP-C		Cu	7440-50-8		5.0889	mg			5,000
				C	GROUP-C		Sn	7440-31-5		971.9799	mg			954,99
Flux	1	mg		C	GROUP-C		Modified rosin	65997-05-9		0.724	mg			723,99
				C	GROUP-C		Distillates, petroleum, s	64741-44-2		0.175	mg			174,99
				C	GROUP-C		Triethanolamine	102-71-6		0.0505	mg			50,499
				C	GROUP-C		Diethanolamine	111-42-2		0.0505	mg			50,499
Thermally condu	75	mg		C	GROUP-C		Polymer Resin	Trade Secret		20.625	mg			274,99
				C	GROUP-C		Allylether	Trade Secret		2.25	mg			29,999
				C	GROUP-C		Other	Trade Secret		18.375	mg			244,99
				C	GROUP-C		Inorganic Compounds	Trade Secret		33.75	mg			449,99
Bump	172.09	mg		C	GROUP-C		Sn	7440-31-5		6.5646	mg			38,146
				A	Lead/Lead Compound		Pb	7439-92-1		165.5254	mg			961,85
Ball mount flux	2	mg		C	GROUP-C		Anime surfactant	61790-85-0		0.78	mg			389,99
				C	GROUP-C		Bara Terpeneol	8000-41-7		0.66	mg			329,99
				C	GROUP-C		Nomionic surfactant	68439-49-6		0.56	mg			279,99
Stiffener ring	3,178.73	mg		B	Nickel/Nickel Compou		Nickel	7440-02-0		19.07238	mg			991.17
				C	GROUP-C		Chrome	Trade Secret		1.589365	mg			500
				C	GROUP-C		Copper	7440-50-8		3,158.068	mg			993,49
Ink	0.5	mg		C	GROUP-C		Propylene glycol monom	108-65-6		0.04	mg			79,999
				C	GROUP-C		Phenol	108-92-5		0.015	mg			29,999
				C	GROUP-C		Isobutyl alcohol	78-83-1		0.015	mg			29,999
				C	GROUP-C		Triethyl phosphate trieth	78-40-0		0.065	mg			129,99
				C	GROUP-C		Carbon black	1333-86-4		0.3	mg			599,99
				C	GROUP-C		Formaldehyde	50-00-0		0.065	mg			129,99