



# 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 * Mindspeed Technologies, Inc	Company Unique ID	Unique ID Authority	Response Date * 2011-05-04	Response Document ID				
Contact Name * Cynthia Ong	Title - Contact Program Manager	Phone - Contact * 949-579-5515	Email - Contact * cynthia.ong@mindspeed.com					
Authorized Representative * CH Choong	Title - Representative Senior Quality Engineer	Phone - Representative * +6(04)-632 8036	Email - Representative * ch.choong@mindspeed.com	Supplier Comments or URL for Additional Information				
Requester Item Number	Mfr Item Number	Mfr Item Name	Effective Date	Version	Manufacturing Site	Weight *	UOM	Unit Type
M21170G-12	M21170G-12	50 HFCBGA 2389		B	ASE, Taiwan	28,375.137	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	N/A	4	245 C	40 seconds	3
Comments NA					

\* Required Field

CAS Registry Number(R) is a Registered Trademark of the American Chemical Society

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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
											-	+	
M21170G-12	Substrate	5,376.45	mg	C	GROUP-C	Alumina	1344-28-1		214.735	mg			39,939
				C	GROUP-C	Copper	7440-50-8		2,576.285	mg			479,17
				C	GROUP-C	Silica	7631-86-9		797.657	mg			148,36
				C	GROUP-C	Plyphenylene ether (PPE			866.474	mg			161,16
				B	Bismuth/Bismuth Com	Bismuth	7440-69-9		10.641	mg			375.01
				B	Antimony/Antimony C	Antimony trioxide	1309-64-4		50.23	mg			1,770.2
				C	GROUP-C	Magnesium oxide	1309-48-4		85.894	mg			15,975
				C	GROUP-C	Silver	7440-22-4		4.751	mg			883.66
				C	GROUP-C	Calcium oxide	1305-78-8		343.576	mg			63,903
				B	Arsenic/Arsenic Comp	Arsenic	7440-38-2		0.235	mg			8.2818
				C	GROUP-C	Epoxy resin			105.012	mg			19,531
				C	GROUP-C	Talc	14807-96-6		21.04	mg			3,913.3
				C	GROUP-C	Brome compounds			163.249	mg			30,363
				C	GROUP-C	Tin	7440-31-5		112.497	mg			20,924
				C	GROUP-C	Barium sulfate	7727-43-7		24.174	mg			4,496.2
Heatslug		20,103.7	mg	C	GROUP-C	Copper	7440-50-8		19,983.07	mg			993,99
				B	Nickel/Nickel Compou	Nickel	7440-02-0		120.6222	mg			4,250.9
Solder ball		2,105.3	mg	C	GROUP-C	Ag	7440-22-4		63.159	mg			30,000
				C	GROUP-C	Sn	7440-31-5		2,031.614	mg			964,99
				C	GROUP-C	Cu	7440-50-8		10.5265	mg			5,000
Thermally condu		280	mg	C	GROUP-C	Alumina	01344-28-1		252	mg			899,99
				C	GROUP-C	Others	Trade Secret		28	mg			99,999
Underfill		46	mg	C	GROUP-C	Silicon dioxide	60676-86-0		21.16	mg			459,99

				C	GROUP-C		Carbon black	1333-86-4		0.46	mg			9,999.9
				C	GROUP-C		Amine type accelerator	Trade Secret		2.3	mg			49,999
				C	GROUP-C		Phenolic resin	9003-35-4		9.2	mg			199,99
				C	GROUP-C		Bisphenol A type liquid	25068-38-6		1.38	mg			29,999
				C	GROUP-C		Bisphenol F type liquid	9003-36-5		9.2	mg			199,99
				C	GROUP-C		Additives	Trade Secret		2.3	mg			49,999
Die	460.7	mg		C	GROUP-C		Silicon	7440-21-3		460.7	mg			999,99
Bump	2.988	mg		A	Lead/Lead Compound		Sn	7439-92-1		0.33	mg			110,44
				C	GROUP-C		Pb	7440-31-5		2.658	mg			889,55