



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 http://www.ipc.org/IPC-175x	Form Type * Distribute	Declaration Class * Class 6 - RoHS Yes/No, Homogeneous Materials and Mfg Informat
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Supplier Information

Company Name * Littelfuse, Inc.	Company Unique ID	Unique ID Authority	Response Date * 2018-01-12	Response Document ID				
Contact Name * Rosalie N. Reyes	Title - Contact Global EHS Analyst	Phone - Contact * 63 43 4300100	Email - Contact * EnvRequests@littelfuse.com					
Authorized Representative * Arsenio M. Cesista Jr.	Title - Representative Global EHS Manager	Phone - Representative * 63 43 4300100	Email - Representative * EnvRequests@littelfuse.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
5KP250CA, 15KPA28A~15	5KP250CA, 15KPA28A~15KP	Chip size is 220 mil ,hexagon d			China	2.592	g	Each
Alternate Recommendation			Alternate Item Comments					

Manufacturing Process Information

Terminal Plating / Grid Array Material Matte Tin (Sn)	Terminal Base Alloy CU Alloy	J-STD-020 MSL Rating 1	Peak Process Body Temperature 260 C	Max Time at Peak Temperature 40 seconds	Number of Reflow Cycles 3
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Comments

Compliant to RoHS Directive (EU) 2015-863.

* Required Field

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Save the fields in this form to a file	<input type="button" value="Export Data"/>	Import fields from a file into this form	<input type="button" value="Import Data"/>	Locked
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RoHS Material Composition Declaration	Declaration Type *	<input type="button" value="Detailed"/>
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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
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Please indicate whether any homogeneous material (as defined by the RoHS Directive, EU 2002/95/EC and implemented by the laws of the European Union member states) of the part identified on this form contains lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls and/or polybrominated diphenyl ethers (each a "RoHS restricted substance") in excess of the applicable quantity limit identified above. If a homogeneous material within the part contains a RoHS restricted substance in excess of an applicable quantity limit, please indicate below which, if any, RoHS exemption you believe may apply. If the part is an assembly with lower level components, the declaration shall encompass all such components. Supplier certifies that it gathered the information it provides in this form 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. In the absence of such written agreement, the warranty rights and/or remedies of Supplier's Standard Terms and Conditions of Sale applicable to such part shall apply.

RoHS Declaration *	4 - Item(s) does not contain RoHS restricted substances per the definition above except for selected exemptions	Supplier Acceptance *	<input type="button" value="Accepted"/>
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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
7a. Lead in high melting temperature type solders (i.e. lead based solder alloys containing 85% by weight or more lead).	
5. Lead in glass of cathode ray tubes, electronic components and fluorescent tubes.	

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	Rosalie N. Reyes	Digitally signed by Rosalie N. Reyes Date: 2018.01.12 12:15:23 +08'00'
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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
											-	+	
Chip size is 220 mil	Molding Compound	0.67	g	Supplier	Silica	Quartz Silica	14808-60-7		0.4355	g			
				Supplier	Epoxy Resin	Epoxy Resin	29690-82-2		0.1005	g			
				Supplier	Phenolic Resin	Phenolic Resin	9003-35-4		0.067	g			
				Supplier	Fire-retardant	Metal Hydroxide	system		0.05025	g			
				Supplier	Carbon Black	Carbon Black	1333-86-4		0.01675	g			
Lead Frame	0.828	g	Supplier	Copper	Copper	7440-50-8		0.827586	g				
			Supplier	Others	Others	SYSTEM		0.000414	g				
Lead Finish	0.03	g	Supplier	Tin	Tin	7440-31-5		0.03	g				
Slug / Disc	0.88	g	Supplier	Copper	Copper	7440-50-8		0.8096	g				
			Supplier	Silver	Silver	7440-22-4		0.0704	g				
Die Attach (Solder)	0.128	g	Supplier	Tin	Tin	7440-31-5		0.0064	g				
			A	Lead/Lead Compound	Lead	7439-92-1	7a. Lead	0.1184	g			925,00	
			Supplier	Silver	Silver	7440-22-4		0.0032	g				
Chip Metalization	0.0518	g	Supplier	Silicon	Silicon	7440-21-3		0.051541	g				
			B	Nickel (external applic)	Nickel	7440-02-0		0.000259	g				
Chip Passivation	0.003	g	Supplier	PbO	PbO	1317-36-8	5. Lead in	0.00135	g			450,00	
			Supplier	Boron	Boron	7440-42-8		0.00006	g				
			Supplier	Oxygen	Oxygen	7782-44-7		0.00015	g				
			Supplier	Al2O3	Al2O3	1344-28-1		0.00009	g				
			Supplier	SiO2	SiO2	7631-86-9		0.00135	g				
Outside Marking	0.0012	g	Supplier	2-Propenoic acid, po	2-Propenoic acid, polyr	53192-18-0		0.00084	g				
			Supplier	Aluminium	Aluminium	7429-90-5		0.00024	g				
			Supplier	Silicon dioxide	Silicon dioxide	112945-52-1		0.00003	g				

* Required Field

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Supplier	Methanone, (1-hydro.		Methanone, (1-hydroxy	947-19-3		0.00003	g			
Supplier	Benzoicacid,4-(dimet		Benzoicacid,4-(dimethy	21245-01-2		0.00006	g			

* Required Field

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