

		Material Composition Declaration Copyright 2005. IPC, Bannockburn, Illinois. All rights reserved under both international and Pan-American copyright conventions.		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.							
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 Information					
Supplier Information											
Company Name * National Semiconductor		Company Unique ID NATSEMI		Unique ID Authority 04-147-2986		Response Date * 06-02-2009		Response Document ID			
Contact Name * Elizabeth Cathers		Title - Contact Product Ecology Eng. Mgr		Phone - Contact * 1-408-721-5248		Email - Contact * Green.Project@nsc.com					
Authorized Representative * Elizabeth Cathers		Title - Representative Product Ecology Eng. Mgr		Phone - Representative * 1-408-721-5248		Email - Representative * Green.Project@nsc.com		Supplier Comments or URL for Additional Information http://www.national.com/analog/quality/green			
	Requester Item Number	Mfr Item Number		Mfr Item Name		Effective Date	Version	Manufacturing Site	Weight *	UOM	Unit Type
		LM158J/883 MLGE660		LM158J/883 MLGE660		06-02-2009			1195.68	mg	Each
	Alternate Recommendation						Alternate Item Comments				
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	
SnPb		Alloy 42		1		260 C		40 seconds		4	
Comments											
"Does not contain PFOS."											

RoHS Material Type Declaration		Declaration Type * Custom	
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		
<p>Subject to the limitations below, National Semiconductor Corporation ("National") certifies the following information as of the document date.</p> <ol style="list-style-type: none"> 1. National products designated "ROHS Compliant" comply with the European Unions Directive on the Restriction of the Use of Hazardous Substances 2002/95/EC ("RoHS"). Certain National products contain lead in RoHS exempt applications 5, 7a or 7c. 2. National products do not contain and are not manufactured with ozone depleting compounds. 3. National products do not contain substances identified by the European Chemical Agency ("ECHA") as substances of very high concern ("SVHC"). 4. National products are manufactured in conformance with National specifications (SC)CSP-9-111C1 Supplier Environmental Requirements for Materials and Products and (SC)CSP-9-111S2 Banned and Reportable Substances. 5. National's list of banned and reportable substances and management system is based on the current version of the Joint Industrial Guide, JIG-101. <p>National has taken commercially reasonable steps to provide representative and accurate information but may not have independently verified information provided or conducted chemical analysis of incoming materials. Equivalent compliant materials may have been substituted for those stated herein. Material concentrations are the maximum expected concentration of the substance in the device and may not represent the actual concentration. National and its suppliers consider certain limited information to be confidential and thus CAS numbers and other limited information may not be available for release. National's Standard Terms and Conditions of Sale apply to any issue arising out of or in connection with the information provided herein unless otherwise provided by a written contract signed by both parties.</p> <p>NATIONAL ACCEPTS NO DUTY TO NOTIFY USERS OF THIS DECLARATION OF UPDATES OR CHANGES TO THIS DECLARATION</p>			
RoHS Declaration *	2 - Item(s) contains RoHS restricted substances per the definition above and is not under exemption	Supplier Acceptance *	Accepted
<p>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 and above and choose all applicable exemptions.</p>			
Declaration Signature			
Supplier Signature	 Gerry Edwards Vice President Quality		

Homogeneous Material Composition Declaration for Electronic Products

Item/SubItem Name	Homogeneous Material	Weight	Unit of Measure	Level	Substance Category	Substance	CAS	Exempt	Weight	Unit of Measure	Tolerance	PPM
	Ceramic Body	814.000	mg	Requester		Al2O3	1344-28-1		720.960	mg		885,700
				Requester		MnO2	1313-13-9		27.432	mg		33,700
				Requester		SiO2	60676-86-0		23.606	mg		29,000
				Requester		TiO2	13463-67-7		15.140	mg		18,600
				Requester		Cr2O3	1308-38-9		11.315	mg		13,900
				Requester		Fe2O3	1309-37-1		9.166	mg		11,260
				Requester		MgO	1309-48-4		4.257	mg		5,230
				Requester		Co3O4	1308-06-1		2.125	mg		2,610
Chip	2.200	mg	Requester		Si	7440-21-3		2.187	mg		994,000	
			Requester		Al	7429-90-5		0.013	mg		6,000	
Die Attach	2.220	mg	Requester		Ag	7440-22-4		1.776	mg		800,000	
			Requester		Lead Borate Glass	65997-18-4		0.444	mg		200,000	
Ext. LeadFinish	12.200	mg	Requester		Sn	7440-31-5		7.686	mg		630,000	
			Requester		Pb	7439-92-1		4.514	mg		370,000	
Leadframe	136.000	mg	Requester		Fe	7439-89-6		78.880	mg		580,000	
			Requester		Ni	7440-02-0		57.120	mg		420,000	
Seal Glass	229.000	mg	Requester		PbO	1317-36-8		118.874	mg		519,100	
			Requester		SnO2	18282-10-5		51.227	mg		223,700	
			Requester		ZnO	1314-13-2		27.022	mg		118,000	
			Requester		B2O3	1303-86-2		18.641	mg		81,400	
			Requester		SiO2	60676-86-0		10.694	mg		46,700	
			Requester		Al2O3	1344-28-1		2.542	mg		11,100	
Wires	0.061	mg	Requester		Al	7429-90-5		0.060	mg		990,000	

Requester		Si	7440-21-3		0.001	mg		10,000
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