

		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 * 01-18-2012		Response Document ID		
Contact Name * Lorena Dudman		Title - Contact Product Stewardship Eng.		Phone - Contact * 1-408-721-8180		Email - Contact * Green.Project@nsc.com				
Authorized Representative * Lorena Dudman		Title - Representative Product Stewardship Eng.		Phone - Representative * 1-408-721-8180		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	
		LF411MWG-MLS	LF411MWG-MLS	01-18-2012			241.09	mg	Each	
	Alternate Recommendation				Alternate Item Comments					
Manufacturing Process Information										
Terminal Plating / Grid Array Material SnPb		Terminal Base Alloy Alloy 42		J-STD-020 MSL Rating 1		Peak Process Body Temperature NA C		Max Time at Peak Temperature NA seconds		Number of Reflow Cycles NA
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 7(a) or 7(c)-I. 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") per REACH Regulation (EC) No 1907/2006. National also complies with use restrictions as stipulated in Annex XVII of REACH. 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	 John L. Conn Vice President Quality		
	John L. Conn 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
	Seal Glass	55.060	mg	Requester		PbO	1317-36-8		28.582	mg		519,100
				Requester		SnO2	18282-10-5		12.317	mg		223,700
				Requester		ZnO	1314-13-2		6.497	mg		118,000
				Requester		B2O3	1303-86-2		4.482	mg		81,400
				Requester		SiO2	60676-86-0		2.571	mg		46,700
				Requester		Al2O3	1344-28-1		0.611	mg		11,100
	Ext. LeadFinish	3.270	mg	Requester		Sn	7440-31-5		2.060	mg		630,000
				Requester		Pb	7439-92-1		1.210	mg		370,000
	Leadframe	24.100	mg	Requester		Fe	7439-89-6		13.978	mg		580,000
				Requester		Ni	7440-02-0		10.122	mg		420,000
	Ceramic Body	155.499	mg	Requester		Al2O3	1344-28-1		137.726	mg		885,700
				Requester		MnO2	1313-13-9		5.240	mg		33,700
				Requester		SiO2	60676-86-0		4.510	mg		29,000
				Requester		TiO2	13463-67-7		2.892	mg		18,600
				Requester		Cr2O3	1308-38-9		2.161	mg		13,900
				Requester		Fe2O3	1309-37-1		1.751	mg		11,260
				Requester		MgO	1309-48-4		0.813	mg		5,230
				Requester		Co3O4	1308-06-1		0.406	mg		2,610
	Die Attach	1.600	mg	Requester		Ag	7440-22-4		1.280	mg		800,000
				Requester		Lead Borate Glass	65997-18-4		0.320	mg		200,000
	Chip	1.530	mg	Requester		Si	7440-21-3		1.521	mg		994,000
				Requester		Al	7429-90-5		0.009	mg		6,000
	Wires	0.033	mg	Requester		Al	7429-90-5		0.033	mg		990,000

Requester		Si	7440-21-3		0.000	mg		10,000
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