



Materials Declaration Form

IPC Form Type *	1752 Distribute	Version	2
Sectionals *	Material Info Manufacturing Info	Subsectionals *	A-D

*: Required Field

Supplier Information			
Company Name *	STMicroelectronics	Response Date *	2013-07-10
Contact Name *	Refer to "Supplier Comment" section	Contact Title	Refer to "Supplier Comment" section
Contact Phone *	Refer to "Supplier Comment" section	Contact Email *	Refer to "Supplier Comment" section
Authorized Representative *	Giuseppe Vitali Palma	Representative Title	AMS/IPD Materials Declaration Champion)
Representative Phone *	Refer to "Supplier Comment" section	Representative Email *	Refer to "Supplier Comment" section
Supplier Comment	Online Technical Support - STMicroelectronics : http://www.st.com/internet/com/support/online_tech_support.jsp		

Uncertainty Statement


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Legal Statement			
Supplier Acceptance *	true	Legal Declaration *	Standard

Legal Statement

Supplier certifies that it gathered the provided information and 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. 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(s), 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(s), 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.

Product				
Mfr Item Number	Mfr Item Name	Version	Mfr Site	Date
	TSFP*MQ6DB63	A	LGGA	2013-07-10
Amount	UoM	Unit type	ST ECOPACK Grade	
1900.00	mg	Each	ECOPACK® 2	

Manufacturing information				
J-STD-020 MSL Rating	Classification Temp	Nbr of Reflow Cycles	 life.augmented	
NAC	NAC	NAC		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
Not Applicable ; if coating is used o	Tin (Sn), matte	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
SIP	10.2X9.2X4.5	2	Through-hole	
Comment	Package: TO 220 ISO FULL PACK IN LINE			

QueryList : ROHS directive 2011/65/EU _ July 2011	
Query	Response
Product(s) meets EU RoHS requirement without any exemptions	false
Product(s) meets EU RoHS requirements except lead in solder and this usage may qualify under the lead in solder '7b' exemption (other selected exemptions may apply)	false
Product(s) meets EU RoHS requirements by application of the selected exemption(s)	true
Product(s) does not meet EU RoHS requirements and is not under exemptions	false
Product(s) is obsolete, no information is available	false
Product(s) is unknown, no information is available	false
Exemption Id.	Description
7a	Lead in high melting temperature type solders (i.e. lead- based alloys containing 85 % by weight or more lead)

QueryList :REACH-18 June 2012				
Query				Response
The product does not contain REACH Substances Of Very High Concern above the limits per the definition within REACH				true
CategoryLevel_Name	CategoryLevel_Threshold	amount in product (mg)	Application	ppm in product

Material Composition Declaration						Mfr Item Name	TSFP*MQ6DB63					
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)
die (s)	Other inorganic materials	4.171	mg	supplier	die	Silicon (Si)	7440-21-3		3.791	mg	908895	1995
die (s)				supplier	metallization	Aluminium (Al)	7429-90-5		0.074	mg	17742	99
die (s)				supplier	passivation	Silicon Nitride (SiN)	68034-42-4		0.018	mg	4316	9
die (s)				supplier	passivation	Silicon Oxide(SiO2)	7631-86-9		0.025	mg	5994	13
die (s)				supplier	passivation	Alumina	1344-28-1		0.026	mg	6234	14
die (s)				supplier	passivation	Lead silicate Glass	65997-18-4		0.237	mg	56821	125
Leadframe	Copper & its alloys	624.516	mg	supplier	alloy	Copper (Cu)	7440-50-8		623.69	mg	998677	328258
Leadframe				supplier	alloy	Iron (Fe)	7439-89-6		0.625	mg	1001	929
Leadframe				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.187	mg	299	98
Leadframe				supplier	metallization	Nickel (Ni)	7440-02-0		0.013	mg	21	7
Leadframe				supplier	metallization	Phosphorus (P)	12185-10-3		0.001	mg	2	1
Die attach	Other Organic Materials	3.245	mg	JIG R	Soft solder	Lead (Pb)	7439-92-1	7a-Lead in high me	3.099	mg	955008	1631
Die attach				supplier	Soft solder	Silver (Ag)	7440-22-4		0.081	mg	24961	43
Die attach				supplier	Soft solder	Tin (Sn)	7440-31-5		0.065	mg	20031	34
Bonding wire	Other inorganic materials	1.104		supplier	wire	Aluminium (Al)	7429-90-5		1.103	mg	999094	581
Bonding wire				supplier	wire	Magnesium (Mg)	7439-95-4		0.001	mg	906	1
encapsulation	Other Organic Materials	1261.098	mg	supplier	mold compound	Silica, vitreous	60676-86-0		94.582	mg	75000	49780
encapsulation				supplier	mold compound	Quartz	14808-60-7		882.769	mg	700000	464615
encapsulation				supplier	mold compound	Epoxy resin	Proprietary		176.554	mg	140000	92923
encapsulation				supplier	mold compound	phenol resin	Proprietary		88.277	mg	70000	46462
encapsulation				supplier	mold compound	carbon black	1333-86-4		6.305	mg	5000	3318
encapsulation				supplier	mold compound	metal hydroxide	Proprietary		12.611	mg	10000	6637
connections coating	Solder	5.866	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		5.866	mg	1000000	3087