



Materials Declaration Form

IPC Form Type *	1752 Distribute	Version	2
Sectionals *	Material Info Manufacturing Info	Subsectionals *	A-D
<i>* : Required Field</i>			

Supplier Information			
Company Name *	STMicroelectronics	Response Date *	2013-10-28
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 *	Giovanni Giacopello	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
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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
	21CA*MV3BAAA	A	MA1A	2013-10-28
Amount	UoM	Unit type	ST ECOPACK Grade	
8.3	mg	Each	ECOPACK® 2	

Manufacturing information				
J-STD-020 MSL Rating	Classification Temp	Nbr of Reflow Cycles	 life.augmented	
3	260	3		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy		
Not Applicable ; if coating is used o	Nickel/Gold (Ni/Au), electrolytic	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
BGA	2, 2, 1	12	No lead	
Comment	Package: LGA 2X2X1 12LD PITCH 0.5MM			

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
7c-I	Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g. piezoelectronic devices

QueryList :REACH-19 December 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
Diboron trioxide	1000 ppm	0.012		1446

Material Composition Declaration						Mfr Item Name	21CA*MV3BAAA					
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	2.518	mg	supplier	die	Silicon (Si)	7440-21-3		2.127	mg	844718	256265
die (s)				supplier	metallisation	Aluminium (Al)	7429-90-5		0.014	mg	5560	1687
die (s)				supplier	metallisation	Copper (Cu)	7440-50-8		0.039	mg	15488	4699
die (s)				supplier	metallisation	Tantalum (Ta)	7440-25-7		0.005	mg	1986	602
die (s)				supplier	metallisation	Titanium (Ti)	7440-32-6		0.003	mg	1191	361
die (s)				supplier	passivation	Silicon Nitride (SiN)	68034-42-4		0.013	mg	5163	1566
die (s)				supplier	passivation	Silicon Oxide	7631-86-9		0.147	mg	58380	17711
die (s)				R	passivation	Lead Oxide	1317-36-8	7c-I-Electrical and e	0.109	mg	43288	13133
die (s)				supplier	passivation	Boron Trioxide	1303-86-2		0.012	mg	4766	1446
die (s)				supplier	passivation	Silicon Oxide	7631-86-9		0.017	mg	6751	2048
die (s)				supplier	passivation	Aluminium oxide	1344-28-1		0.017	mg	6751	2048
die (s)				supplier	passivation	Butyl Carbitol Acetate	124-17-4		0.009	mg	3574	1084
die (s)				supplier	passivation	Ethyl cellulose	9004-57-3		0.003	mg	1191	361
die (s)				supplier	passivation	Terpineol	8000-41-7		0.003	mg	1191	361
substrate	Other Organic Materials	2.026	mg	supplier	core material	Fiber glass	65997-17-3		0.607	mg	299605	73133
substrate				supplier	core material	Bisphenol F type epoxy resin	9003-36-5		0.338	mg	166831	40723
substrate				supplier	core material	metal hydroxide	21645-51-2		0.014	mg	6910	1687
substrate				supplier	core material	Zinc hydroxyde	20427-58-1		0.003	mg	1481	361
substrate				supplier	core material	Calcium sulfate	7778-18-9		0.007	mg	3455	843
substrate				supplier	core material	Bismaleimide (B)	105391-33-1		0.206	mg	101678	24819
substrate				supplier	core material	Triazine (T)	25722-66-1		0.206	mg	101678	24819
substrate				supplier	Solder mask	Baryum sulfate	7727-43-7		0.043	mg	21224	5181
substrate				supplier	Solder mask	(2-methoxymethylethoxy)propanol	34590-94-8		0.007	mg	3455	843
substrate				supplier	Solder mask	Talc containing no asbestiform fibers	14807-96-6		0.024	mg	11846	2892
substrate				supplier	Solder mask	Quartz	14808-60-7		0.024	mg	11846	2892
substrate				supplier	Solder mask	Acrylates derivative	9003-01-4		0.099	mg	48865	11928
substrate				supplier	Solder mask	Epoxy resin	29690-82-2		0.033	mg	16288	3976
substrate				supplier	Solder mask	aromatic hydrocarbon	Proprietary		0.01	mg	4936	1205
substrate				supplier	metallisation	Copper (Cu)	7440-50-8		0.381	mg	188055	45904
substrate				supplier	metallisation	Nickel (Ni)	7440-02-0		0.02	mg	9872	2410
substrate				supplier	metallisation	Gold (Au)	7440-57-5		0.004	mg	1974	482
Die attach	Other inorganic materials	0.098	mg	supplier	glue or tape	Acrylic resin	9003-01-4		0.031	mg	316327	3735
Die attach				supplier	glue or tape	epoxy resin	Proprietary		0.062	mg	632653	7470
Die attach				supplier	glue or tape	Diphenol Propane Diglycidyl Ether	1675-54-3		0.005	mg	51020	602
Die attach 2	Other inorganic materials	0.017	mg	supplier	glue or tape	Acrylic resin	9003-01-4		0.003	mg	176471	361
Die attach 2				supplier	glue or tape	Epoxyde Bisphenol A Resin	25068-38-6		0.003	mg	176471	361
Die attach 2				supplier	glue or tape	epoxy resin	25038-59-9		0.004	mg	235294	482
Die attach 2				supplier	glue or tape	amorphous silica	7631-86-9		0.007	mg	411765	843
Bonding wire	Precious metals	0.215	mg	supplier	wire	Gold (Au)	7440-57-5		0.213	mg	990698	25663
Bonding wire				supplier	wire	Palladium (Pd)	7440-05-3		0.002	mg	9302	241
encapsulation	Other inorganic materials	3.426	mg	supplier	mold compound	Silica, vitreous	60676-86-0		2.998	mg	875073	361205
encapsulation				supplier	mold compound	Epoxy Resin	85954-11-6		0.137	mg	39988	16506
encapsulation				supplier	mold compound	Epoxy resin	Proprietary		0.137	mg	39988	16506
encapsulation				supplier	mold compound	Phenol Resin	26834-02-6		0.137	mg	39988	16506
encapsulation				supplier	mold compound	Carbon black	1333-86-4		0.017	mg	4962	2048