



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 *	2015-04-16
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 *	Floriana SAN BIAGIO	Representative Title	AMS 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/web/en/support/support.html		

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
	21DC*MV6HAAB	A	MA1A	2015-04-16
Amount	UoM	Unit type	ST ECOPACK Grade	
14.00	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	Comment	
Not Applicable ; if coating is used o	Nickel/Gold (Ni/Au), electrolytic	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
LGA	2.5 x 3 x 0.86 mm	14	flat	

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, or in a glass or ceramic matrix compound

QueryList : REACH-16th June 2014				
Query				Response
The product does not contain REACH Substances Of Very High Concern above the limits per the definition within REACH				false
CategoryLevel_Name	CategoryLevel_Threshold	amount in product (mg)	Application	ppm in product
Lead monoxide (lead oxide)	1000 ppm	0.023		1643

Material Composition Declaration						Mfr Item Name	21DC*MV6HAAB					
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)
Silicon die	Other inorganic materials	6.506	mg	supplier	die	Silicon (Si)	7440-21-3		6.359	mg	977405	454214
Silicon die				supplier	metallisation	Aluminium (Al)	7429-90-5		0.018	mg	2767	1286
Silicon die				supplier	metallisation	Copper (Cu)	7440-50-8		0.025	mg	3843	1786
Silicon die				supplier	metallisation	Tantalum (Ta)	7440-25-7		0.005	mg	769	357
Silicon die				supplier	metallisation	Titanium (Ti)	7440-32-6		0.008	mg	1230	571
Silicon die				supplier	metallisation	Tungsten (W)	7440-33-7		0.002	mg	307	143
Silicon die				SVHC	passivation	Lead Oxide	1317-36-8	7c-1-Electrical and e	0.023	mg	3535	1643
Silicon die				SVHC	passivation	Boron Trioxide	1303-86-2		0.002	mg	307	143
Silicon die				supplier	passivation	Silicon Oxide	7631-86-9		0.004	mg	615	286
Silicon die				supplier	passivation	Aluminium oxide	1344-28-1		0.004	mg	615	286
Silicon die				supplier	passivation	Butyl Carbitol Acetate	124-17-4		0.002	mg	307	143
Silicon die				supplier	passivation	Ethyl cellulose	9004-57-3		0.001	mg	154	71
Silicon die				supplier	passivation	Terpineol	8000-41-7		0.001	mg	154	71
Silicon die				supplier	passivation	Silicon Nitride (SiN)	68034-42-4		0.012	mg	1844	857
Silicon die				supplier	passivation	Silicon Oxide(SiO2)	7631-86-9		0.04	mg	6148	2857
substrate	Other Organic Materials	2.983	mg	supplier	core material	Fiber glass	65997-17-3		1.013	mg	339591	72357
substrate				supplier	core material	epoxy resin	7328-97-4		0.338	mg	113309	24143
substrate				supplier	core material	Calcium carbonate	471-34-1		0.675	mg	226282	48214
substrate				supplier	core material	Calcium oxide	1305-78-8		0.113	mg	37881	8071
substrate				supplier	core material	inorganic filler	Proprietary		0.113	mg	37881	8071
substrate	Copper & its alloys			supplier	metallisation	Copper (Cu)	7440-50-8		0.696	mg	233322	49714
substrate	Nickel (Ni)			supplier	metallisation	Nickel (Ni)	7440-02-0		0.031	mg	10392	2214
substrate	Precious metals			supplier	metallisation	Gold (Au)	7440-57-5		0.004	mg	1341	286
Die attach	Other inorganic materials	0.783	mg	supplier	glue or tape	Acrylic resin	9003-01-4		0.235	mg	300128	16786
Die attach				supplier	glue or tape	epoxy resin	Proprietary		0.235	mg	300128	16786
Die attach				supplier	glue or tape	amorphous silica	7631-86-9		0.235	mg	300128	16786
Die attach				supplier	glue or tape	Polyester resin	Proprietary		0.078	mg	99617	5571
Die attach 2	Other inorganic materials	0.194	mg	supplier	glue or tape	Acrylic resin	9003-01-4		0.032	mg	164948	2286
Die attach 2				supplier	glue or tape	Epoxyde Bisphenol A Resin	25068-38-6		0.032	mg	164948	2286
Die attach 2				supplier	glue or tape	epoxy resin	25038-59-9		0.049	mg	252577	3500
Die attach 2				supplier	glue or tape	amorphous silica	7631-86-9		0.081	mg	417526	5786
Bonding wire	Precious metals	0.305	mg	supplier	wire	Gold (Au)	7440-57-5		0.305	mg	1000000	21786
encapsulation	Other inorganic materials	3.229	mg	supplier	mold compound	Silica, vitreous	60676-86-0		2.584	mg	800248	184571
encapsulation				supplier	mold compound	Silica	7631-86-9		0.323	mg	100031	23071
encapsulation				supplier	mold compound	Epoxy Resin	Proprietary		0.129	mg	39950	9214
encapsulation				supplier	mold compound	Epoxyde Bisphenol A Resin	25068-38-6		0.064	mg	19820	4571
encapsulation				supplier	mold compound	Phenol Resin	Proprietary		0.113	mg	34995	8071
encapsulation				supplier	mold compound	Carbon black	1333-86-4		0.016	mg	4955	1143