



## Materials Declaration Form

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

\*: Required Field

Supplier Information			
<b>Company Name *</b>	STMicroelectronics	<b>Response Date *</b>	2015-01-22
<b>Contact Name *</b>	Refer to "Supplier Comment" section	<b>Contact Title</b>	Refer to "Supplier Comment" section
<b>Contact Phone *</b>	Refer to "Supplier Comment" section	<b>Contact Email *</b>	Refer to "Supplier Comment" section
<b>Authorized Representative *</b>	Giovanni Giacopello	<b>Representative Title</b>	AMS & IPD Materials Declaration Champion
<b>Representative Phone *</b>	Refer to "Supplier Comment" section	<b>Representative Email *</b>	Refer to "Supplier Comment" section
<b>Supplier Comment</b>	Online Technical Support - STMicroelectronics : <a href="http://www.st.com/internet/com/support/online_tech_support.jsp">http://www.st.com/internet/com/support/online_tech_support.jsp</a>		

**Uncertainty Statement**

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**Legal Statement**

<b>Supplier Acceptance *</b>	true	<b>Legal Declaration *</b>	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
	22AB*HK01AFA	A	MA1A	2015-01-22
Amount	UoM	Unit type	ST ECOPACK Grade	
8.5	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 - 2 - 1	12	No lead	
Comment	Package: VFLGA 2X2X1 12LD PITCH 0.5MM; MDF valid for MIS2DHTR			

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)	false
Product(s) does not meet EU RoHS requirements and is not under exemptions	true
Product(s) is obsolete, no information is available	false
Product(s) is unknown, no information is available	false
Exemption Id.	Description
7c-1	Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g. piezoelectric devices

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				true
CategoryLevel_Name	CategoryLevel_Threshold	amount in product (mg)	Application	ppm in product
Lead monoxide (lead oxide)	1000 ppm	0.109		12824
Diboron trioxide	1000 ppm	0.012		1412

Material Composition Declaration						Mfr Item Name	22AB*HK01AFA					
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	2.912	mg	supplier	die	Silicon (Si)	7440-21-3		2.541	mg	872596	298941
die (s)				supplier	metallisation	Aluminium (Al)	7429-90-5		0.008	mg	2747	941
die (s)				supplier	metallisation	Copper (Cu)	7440-50-8		0.017	mg	5838	2000
die (s)				supplier	metallisation	Tantalum (Ta)	7440-25-7		0.001	mg	343	118
die (s)				supplier	metallisation	Gold (Au)	7440-57-5		0.044	mg	15110	5176
die (s)				supplier	passivation	Silicon Nitride (SiN)	68034-42-4		0.006	mg	2060	706
die (s)				supplier	passivation	Silicon Oxide	7631-86-9		0.125	mg	42926	14706
die (s)				SVHC	passivation	Lead Oxide	1317-36-8	7c-I-Electrical and e	0.109	mg	37431	12824
die (s)				SVHC	passivation	Boron Trioxide	1303-86-2		0.012	mg	4121	1412
die (s)				supplier	passivation	Silicon Oxide	7631-86-9		0.017	mg	5838	2000
die (s)				supplier	passivation	Aluminium oxide	1344-28-1		0.017	mg	5838	2000
die (s)				supplier	passivation	Butyl Carbitol Acetate	124-17-4		0.009	mg	3091	1059
die (s)				supplier	passivation	Ethyl cellulose	9004-57-3		0.003	mg	1030	353
die (s)				supplier	passivation	Terpineol	8000-41-7		0.003	mg	1030	353
substrate	Other Organic Materials	2.245	mg	supplier	core material	Bismaleimide (B)	105391-33-1		0.236	mg	105122	27765
substrate				supplier	core material	Triazine (T)	25722-66-1		0.236	mg	105122	27765
substrate				supplier	core material	Fiber glass	65997-17-3		0.704	mg	313586	82824
substrate				supplier	core material	metal hydroxide	21645-51-2		0.016	mg	7127	1882
substrate				supplier	core material	Zinc hydroxide	20427-58-1		0.005	mg	2227	588
substrate				supplier	core material	Thermosetting resin	54208-63-8		0.395	mg	175947	46471
substrate				supplier	core material	Calcium sulfate	7778-18-9		0.008	mg	3563	941
substrate				supplier	Solder mask	Baryum sulfate	7727-43-7		0.043	mg	19154	5059
substrate				supplier	Solder mask	(2-methoxymethylethoxy)propanol	34590-94-8		0.007	mg	3118	824
substrate				supplier	Solder mask	Talc containing no asbestiform fibers	14807-96-6		0.024	mg	10690	2824
substrate				supplier	Solder mask	Quartz	14808-60-7		0.024	mg	10690	2824
substrate				supplier	Solder mask	Acrylates derivative	9003-01-4		0.099	mg	44098	11647
substrate				supplier	Solder mask	Epoxy resin	29690-82-2		0.033	mg	14699	3882
substrate				supplier	Solder mask	aromatic hydrocarbon	Proprietary		0.01	mg	4454	1176
substrate	Copper & its alloys			supplier	metallisation	Copper (Cu)	7440-50-8		0.381	mg	169710	44824
substrate	Nickel (Ni)			supplier	metallisation	Nickel (Ni)	7440-02-0		0.02	mg	8909	2353
substrate	Precious metals			supplier	metallisation	Gold (Au)	7440-57-5		0.004	mg	1782	471
Die attach	Other inorganic materials	0.445	mg	supplier	glue or tape	Acrylic resin	9003-01-4		0.141	mg	316854	16588
Die attach				supplier	glue or tape	epoxy resin	Proprietary		0.282	mg	633708	33176
Die attach				supplier	glue or tape	Diphenol Propane Diglycidyl Ether	1675-54-3		0.022	mg	49438	2588
Bonding wire	Precious metals	0.188	mg	supplier	wire	Gold (Au)	7440-57-5		0.186	mg	989362	21882
Bonding wire				supplier	wire	Palladium (Pd)	7440-05-3		0.002	mg	10638	235
encapsulation	Other inorganic materials	2.71	mg	supplier	mold compound	Silica, vitreous	60676-86-0		2.373	mg	875646	279176
encapsulation				supplier	mold compound	Epoxy Resin	85954-11-6		0.108	mg	39852	12706
encapsulation				supplier	mold compound	Epoxy resin	Proprietary		0.108	mg	39852	12706
encapsulation				supplier	mold compound	Phenol Resin	26834-02-6		0.108	mg	39852	12706
encapsulation				supplier	mold compound	Carbon black	1333-86-4		0.013	mg	4797	1529