

## **Materials Declaration Form**

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

Supplier Information								
Company Name *	STMicroelectronics	Response Date *	2013-04-25					
Contact Name *	Refer to " Supplier Comment" section	Contact Title	Refer to " Supplier Comment" section					
Contact Phone *	Refer to " Supplier Comment" section	Refer to " Supplier Comment" section						
Authorized Representative *	Carole DEL PUPPO	Representative Title	DCG Materials Declaration Champion					
Representative Phone *	Refer to " Supplier Comment" section	Representative Email *	Refer to " Supplier Comment" section					
Supplier Comment	Online Technical Support - STMicroele	/com/support/online_tech_support.jsp						

## **Uncertainty Statement**

While STMicroelectronics has endeavored to provide information which is accurate and up to date, this document and its contents are provided on a strict 'as is' and 'as available' basis. STMicroelectronics disclaims all warranties, express or implied related to this document and its contents, including but not limited to implied warranties of completeness, truth, accuracy, merchantability, fitness for a particular purpose and non-infringement. ST shall have no responsibility and assumes no liability for any cost, loss or damage of any kind which could arise, directly or indirectly, from the use or inability to use this document and/or its contents.

## 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 omprehensive 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									
STV0913BSB/B22	22P4*0913BBL	А	MA1A	2013-04-25					
	Amount	UoM	Unit type	ST ECOPACK Grade					
	163.0	mg	Each	ECOPACK® 2					

Manufacturing information									
J-STD-020 MSL Rating	J-STD-020 MSL Rating Classification Temp Nbr of Reflow Cycles								
3	260	3							
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	life.augmented					
Tin/Silver/Copper (SAC125)	NAC	Copper Alloy	BSA CD00358821 1.0, 1F032617	moradginomod					

Package Designator	Size	Nbr of instances	Shape	
BGA	8x8x1.7	77	bulk solder	
Comment	LFBGA8X8X1.7 77 2R9 P.8 B.4			

QueryList: ROHS directive 2011/65/EU _ July 2011							
	Query Response						
Product(s) meets EU RoHS requirement w	ithout any exemptions	true					
Product(s) meets EU RoHS requirements e	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)						
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							
Product(s) is obsolete, no information is a	false						
Product(s) is unknown, no information is a	false						
Exemption Id. Description							

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			

Material Composition Declaration					Mfr Item Name	22P4*	0913BBL					
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)
die	Other inorganic materials	7.794	mg	supplier	die	Silicon (Si)	7440-21-3		7.405	mg	950090	45429
die				supplier	metallisation	Aluminium (Al)	7429-90-5		0.043	mg	5517	264
die				supplier	metallisation	Copper (Cu)	7440-50-8		0.127	mg	16295	779
die				supplier	metallisation	Tantalum (Ta)	7440-25-7		0.023	mg	2951	141
die				supplier	metallisation	Titanium (Ti)	7440-32-6		0.005	mg	642	31
die				supplier	metallisation	Tungsten (W)	7440-33-7		0.001	mg	128	6
die				supplier	metallisation	Nickel (Ni)	7440-02-0		0.001	mg	128	6
die				supplier	passivation	Silicon Nitride (SiN)	68034-42-4		0.031	mg	3977	190
die				supplier	passivation	Silicon Oxide	7631-86-9		0.158	mg	20272	969
substrate	Other Organic Materials	43.448	mg	supplier	core material	Fiber glass	65997-17-3		12.954	mg	298150	79472
substrate				supplier	core material	Bisphenol F type epoxy resin	9003-36-5		7.213	mg	166015	44252
substrate				supplier	core material	metal hydroxide	21645-51-2		0.294	mg	6767	1804
substrate				supplier	core material	Zinc hydroxyde	20427-58-1		0.059	mg	1358	362
substrate				supplier	core material	Calcium sulfate	7778-18-9		0.147	mg	3383	902
substrate				supplier	core material	Bismaleimide (B)	105391-33-1		4.387	mg	100971	26914
substrate				supplier	core material	Triazine (T)	25722-66-1		4.387	mg	100971	26914
substrate				supplier	Solder mask	Barium sulfate	7727-43-7		0.832	mg	19149	5104
substrate				supplier	Solder mask	(2-methoxymethylethoxy)propanol	34590-94-8		0.139	mg	3199	853
substrate				supplier	Solder mask	Talc containing no asbestiform fibers	14807-96-6		0.462	mg	10633	2834
substrate				supplier	Solder mask	Quartz	14808-60-7		0.462	mg	10633	2834
substrate				supplier	Solder mask	Acrylic resin	9003-01-4		1.913	mg	44030	11736
substrate				supplier	Solder mask	Epoxy resin	29690-82-2		0.628	mg	14454	3853
substrate				supplier	Solder mask	aromatic hydrocarbon	Proprietary		0.183	mg	4212	1123
substrate				supplier	Solder mask	Chlorine	22537-15-1		0.002	mg	46	12
substrate				supplier	metallisation	Copper (Cu)	7440-50-8		9.352	mg	215246	57374
substrate				supplier	metallisation	Gold (Au)	7440-57-5		0.034	mg	783	209
Die attach		2.38	mg	supplier	glue	Silver (Ag)	7440-22-4		1.845	mg	775210	11319
Die attach				supplier	glue	2,6-Diglycidyl phenyl allyl ether	EC 417-470-1		0.071	mg	29832	436
Die attach				supplier	glue	Epoxyde Bisphenol A Resin	25068-38-6		0.464	mg	194958	2847
Bonding wire	Precious metals	1.298	mg	supplier	wire	Gold (Au)	7440-57-5		1.285	mg	989985	7883
Bonding wire				supplier	wire	Palladium (Pd)	7440-05-3		0.013	mg	10015	80
encapsulation	Other Organic Materials	89.165	mg	supplier	mold compound	Biphenyl epoxy resin	85954-11-6		8.917	mg	100006	54706
encapsulation				supplier	mold compound	Phenol resin	205830-20-2		4.458	mg	49997	27350
encapsulation				supplier	mold compound	Quartz	14808-60-7		2.229	mg	24999	13675
encapsulation				supplier	mold compound	Silica, vitreous	60676-86-0		72.669	mg	814995	445822
encapsulation				supplier	mold compound	Carbon Black	1333-86-4		0.803	mg	9006	4926
encapsulation				supplier	mold compound	Magnesium dihydroxide	1309-42-8		0.089	mg	998	546
solder balls	Solder	18.915	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		18.585	mg	982554	114018
solder balls				supplier	solder alloy	Silver (Ag)	7440-22-4		0.227	mg	12001	1393
solder balls				supplier	solder alloy	Copper (Cu)	7440-50-8		0.095	mg	5022	583
solder balls				supplier	solder alloy	Nickel (Ni)	7440-02-0		0.006	mg	317	37
solder balls				R	solder alloy	Lead (Pb)	7439-92-1		0.002	mg	106	12