



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 *	2014-08-18
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 *	Emilio Castelli	Representative Title	APG MD 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
SPC560B50L5C6E0X	A91A*FB50BFQ	A	MA1A	2014-08-18
Amount	UoM	Unit type	ST ECOPACK Grade	
1315.00	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	
NAC	Tin (Sn), matte, annealed	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
QFP	20x20x1.4	144	FLAT	
Comment				

QueryList : ROHS directive 2011/65/EU _ July 2011	
Query	Response
Product(s) meets EU RoHS requirement without any exemptions	true
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	false
Product(s) is obsolete, no information is available	false
Product(s) is unknown, no information is available	false
Exemption Id.	Description

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

Material Composition Declaration						Mfr Item Name	A91A*F850BFQ					
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)
Die or Dies	Other inorganic materials	17.814	mg	supplier	die	Silicon (Si)	7440-21-3		15.661	mg	879140	11910
Die or Dies				supplier	metallization	Aluminium (Al)	7429-90-5		0.029	mg	1628	22
Die or Dies				supplier	metallization	Copper (Cu)	7440-50-8		0.257	mg	14427	195
Die or Dies				supplier	metallization	Tantalum (Ta)	7440-25-7		1.464	mg	82183	1113
Die or Dies				supplier	metallization	Cobalt (Co)	7440-48-4		0.001	mg	56	1
Die or Dies				supplier	metallization	Titanium (Ti)	7440-32-6		0.003	mg	168	2
Die or Dies				supplier	metallization	Tungsten (W)	7440-33-7		0.002	mg	112	2
Die or Dies				supplier	passivation	Silicon Nitride (SiN)	68034-42-4		0.065	mg	3649	49
Die or Dies				supplier	passivation	Silicon Oxide (SiO2)	7631-86-9		0.166	mg	9319	126
Die or Dies				supplier	glass coating	Glass: Silicon Dioxide (SiO2)	7631-86-9		0.166	mg	9319	126
Leadframe	Copper & its alloys	309.538	mg	supplier	alloy	Copper (Cu)	7440-50-8		299.544	mg	967713	227790
Leadframe				supplier	alloy	Iron (Fe)	7439-89-6		7.045	mg	22760	5357
Leadframe				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.424	mg	1370	322
Leadframe				supplier	alloy	Zinc (Zn)	7440-66-6		0.369	mg	1192	281
Leadframe				supplier	tape	poly(4,4'-oxydiphenylene-pyromellitimide)	25036-53-7		0.078	mg	252	59
Leadframe				supplier	metallization	Silver (Ag)	7440-22-4		2.078	mg	6713	1580
Die attach		3.532	mg	supplier	glue or tape	Silver (Ag)	7440-22-4		2.782	mg	787656	2116
Die attach				#N/A	glue or tape	Urethane acrylate oligomer	na		0.247	mg	69932	188
Die attach				#N/A	glue or tape	Methacrylate	na		0.247	mg	69932	188
Die attach				#N/A	glue or tape	Acrylate	na		0.247	mg	69932	188
Die attach				SVHC	glue or tape	NMP	872-50-4		0.009	mg	2548	7
Bonding wire				supplier	wire	Copper (Cu)	7440-50-8		0.921	mg	980831	700
Bonding wire				supplier	wire	Palladium (Pd)	7440-05-3		0.017	mg	18104	13
Bonding wire				supplier	wire	Silver (Ag)	7440-22-4		0.001	mg	1065	1
encapsulation		974.695	mg	#N/A	mold compound	Epoxy Resin	Proprietary		71.319	mg	73171	54235
encapsulation				#N/A	mold compound	Phenol Resin	Proprietary		71.319	mg	73171	54235
encapsulation				supplier	mold compound	Silica, vitreous	60676-86-0		821.596	mg	842926	624788
encapsulation				supplier	mold compound	Quartz	14808-60-7		2.853	mg	2927	2170
encapsulation				supplier	mold compound	3-Mercaptopropyl trimethoxysilane	4420-74-0		4.755	mg	4878	3616
encapsulation				supplier	mold compound	Carbon black	1333-86-4		2.853	mg	2927	2170
connections coating	Solder	8.022	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		8.022	mg	1000000	6100