



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 *	2014-06-16
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 *	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/online_tech_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
SPC56EL60L5CBGQR	C91A*FL60CCQ	A	MA1A	2014-06-16
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 December 2013				
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	C91A*FL60CCQ					
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	34.554	mg	supplier	die	Silicon (Si)	7440-21-3		33.305	mg	963854	25327
die (s)				supplier	metallization	Aluminium (Al)	7429-90-5		0.062	mg	1794	47
die (s)				supplier	metallization	Copper (Cu)	7440-50-8		0.608	mg	17596	462
die (s)				supplier	metallization	Tantalum (Ta)	7440-25-7		0.076	mg	2199	58
die (s)				supplier	metallization	Cobalt (Co)	7440-48-4		0.001	mg	29	1
die (s)				supplier	metallization	Titanium (Ti)	7440-32-6		0.006	mg	174	5
die (s)				supplier	metallization	Tungsten (W)	7440-33-7		0.003	mg	87	2
die (s)				supplier	passivation	Silicon Oxide(SiO2)	7631-86-9		0.139	mg	4023	106
die (s)				supplier	passivation	Indium Tin oxide (In2O3.SnO2)	50926-11-9		0.354	mg	10245	269
Leadframe	Copper & its alloys	322.681	mg	supplier	alloy	Copper (Cu)	7440-50-8		304.848	mg	944735	231824
Leadframe				supplier	alloy	Iron (Fe)	7439-89-6		7.170	mg	22220	5452
Leadframe				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.432	mg	1339	329
Leadframe				supplier	alloy	Zinc (Zn)	7440-66-6		0.375	mg	1162	285
Leadframe				supplier	tape	poly(4,4'-oxydiphenylene-pyromellitimide)	25036-53-7		7.778	mg	24104	5915
Leadframe				supplier	metallization	Silver (Ag)	7440-22-4		2.078	mg	6440	1580
Die attach		6.587	mg	supplier	glue or tape	Silver (Ag)	7440-22-4		5.188	mg	787612	3945
Die attach				supplier	glue or tape	Urethane acrylate oligomer	na		0.461	mg	69986	351
Die attach				supplier	glue or tape	Methacrylate	na		0.461	mg	69986	351
Die attach				supplier	glue or tape	Acrylate	na		0.461	mg	69986	351
Die attach				supplier	glue or tape	NMP	872-50-4		0.016	mg	2429	12
Bonding wire				supplier	wire	Copper (Cu)	7440-50-8		0.815	mg	980746	620
Bonding wire				supplier	wire	Palladium (Pd)	7440-05-3		0.015	mg	18051	11
Bonding wire				supplier	wire	Silver (Ag)	7440-22-4		0.001	mg	1203	1
encapsulation		942.324	mg	supplier	mold compound	Epoxy Resin	Proprietary		70.674	mg	75000	53744
encapsulation				supplier	mold compound	Phenol Resin	Proprietary		47.116	mg	50000	35830
encapsulation				supplier	mold compound	Silica, vitreous	60676-86-0		814.169	mg	864001	619140
encapsulation				supplier	mold compound	Quartz	14808-60-7		2.827	mg	3000	2150
encapsulation				supplier	mold compound	3-Mercaptopropyl trimethoxysilane	4420-74-0		4.711	mg	4999	3583
encapsulation				supplier	mold compound	Carbon black	1333-86-4		2.827	mg	3000	2150
connections coating	Solder	8.022	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		8.022	mg	1000000	6100