



Materials Declaration Form

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

** : Required Field*

Supplier Information			
Company Name *	STMicroelectronics	Response Date *	2015-01-08
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
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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
L5150BNTR	G5LL*UN65BB6	A	Z8GA	2015-01-08
Amount		UoM	Unit type	ST ECOPACK Grade
117.66		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
SOT	6.5x3.5x1.8	3	Through-hole
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	GSL*UN65BB6					
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	1.992	mg	supplier	die	Silicon (Si)	7440-21-3		1.864	mg	935743	15842
Die				supplier	metallization	Aluminium (Al)	7429-90-5		0.013	mg	6526	110
Die				supplier	metallization	Tungsten (W)	7440-33-7		0.021	mg	10542	178
Die				supplier	passivation	Silicon Nitride (SiN)	68034-42-4		0.003	mg	1506	25
Die				supplier	passivation	Silicon Oxide(SiO2)	7631-86-9		0.031	mg	15562	263
Die				supplier	back side metallization	Chromium (Cr)	7440-47-3		0.001	mg	502	8
Die				supplier	back side metallization	Gold (Au)	7440-57-5		0.003	mg	1506	25
Die				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.010	mg	5020	85
Die				supplier	glass coating	Glass: Silicon Dioxide (SiO2)	7631-86-9		0.031	mg	15562	263
Die				supplier	polymer die coating	PIX1 Gamma-butyrolactone	96-48-0		0.015	mg	7530	127
Leadframe(PSI, SOT223C)	Copper and its alloy	58.788	mg	Supplier	Alloy	Copper(CU)	7440-50-8		57.998	mg	986562	492925
Leadframe(PSI, SOT223C)				Supplier	Alloy	Iron(Fe)	7439-89-6		0.058	mg	987	493
Leadframe(PSI, SOT223C)				Supplier	Alloy	Phosphorus(P)	7723-14-0		0.017	mg	289	144
Leadframe(PSI, SOT223C)				Supplier	Alloy	Silver(Ag)	7440-22-4		0.715	mg	12162	6077
Die Attach(Ablestik, 8352L)	Other Organic Material	0.370	mg	Supplier	Epoxy	Trade Secret	NA		0.093	mg	251351	790
Die Attach(Ablestik, 8352L)				Supplier	Epoxy	Andrydride	NA		0.074	mg	200000	629
Die Attach(Ablestik, 8352L)				Supplier	Epoxy	Epoxy Resin	NA		0.093	mg	251351	790
Die Attach(Ablestik, 8352L)				Supplier	Epoxy	Adipic acid	NA		0.110	mg	297297	935
Bonding wire(Heraeus,50um HD)	Other Inorganic Material	0.337	mg	Supplier	Bonding wire	Gold(Au)	7440-57-5		0.337	mg	1000000	2864
Encapsulation(Sumitomo, EMEG600F)	Other Organic Material	54.206	mg	Supplier	Molding compound	Silica Fused	60676-86-0		47.810	mg	882006	406337
Encapsulation(Sumitomo, EMEG600F)				Supplier	Molding compound	Epoxy Resin	NA		2.710	mg	49994	23032
Encapsulation(Sumitomo, EMEG600F)				Supplier	Molding compound	Epoxy, Cresol Novolac	29690-82-2		0.813	mg	14998	6910
Encapsulation(Sumitomo, EMEG600F)				Supplier	Molding compound	Phenol Resin	NA		2.710	mg	49994	23032
Encapsulation(Sumitomo, EMEG600F)				Supplier	Molding compound	Carbon Black	1333-86-4		0.163	mg	3007	1385
Finishing(Yunnan Tin)	Other Inorganic Material	1.967	mg	Supplier	Connection Coating	Tin(Sn)	7440-31-5		1.967	mg	1000000	16718