



Materials Declaration Form

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

*: Required Field

Supplier Information			
Company Name *	STMicroelectronics	Response Date *	2018-02-20
Contact Name *	Refer to Supplier Comment section		Refer to Supplier Comment section
Contact Phone *	Refer to Supplier Comment section	Contact Email *	Refer to Supplier Comment section
Authorized Representative *	Rossana Bonaccorso	Representative Title	ADG 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
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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
STGB19N40LZ	T2D2*IZB4A92	A	3068	2018-02-20
	Amount	UoM	Unit type	ST ECOPACK Grade
	1380	mg	Each	ECOPACK1

Manufacturing information				
J-STD-020 MSL Rating	Classification Temp	Nbr of Reflow Cycles		 life.augmented
1	245	3		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
NA	Tin (Sn), matte	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape
SIP	10.2-9.15-4.5	2	gull wing
Comment	D2PAK		

QueryList : RoHS Directive 2011/65/EU-July 2011 – Annex II amended by Directive 2015/863-April 2015	
Query	Response
1 - Product(s) meets EU RoHS requirement without any exemptions	FALSE
2 - 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
3 - Product(s) meets EU RoHS requirements by application of the selected exemption(s)	TRUE
4 - Product(s) does not meet EU RoHS requirements and is not under exemptions	FALSE
Exemption Id.	Description
7a	Lead in high melting temperature type solders (i.e. lead- based alloys containing 85 % by weight or more lead)

QueryList : California Prop65 list, dated 15th December 2017			
Query			Response
1 - The product does not contain identified substance from California Prop 65 List, no exposure to consumers is foreseen			FALSE
2 - The product is containing below substance(s) from California Prop 65 List, no exposure to consumers is foreseen			TRUE
Substance	amount in product (mg)	Application	ppm in product
Nickel	0.13	Die / Leadframe	93
Lead	7.04	Soft solder	5099
Antimony trioxide	6.95	Mold compound	5036

QueryList : REACH-15th January 2018				
Query				Response
1 - Product(s) 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
2 - Product(s) does not contain REACH Substances Of Very High Concern in any Embedded article nor Homogeneous Material above the limits per the definition within REACH				true
CategoryLevel_Name	CategoryLevel_Threshold	Amount in Embedded Article / Homogeneous Material (mg)	Application - Article / Homogeneous Material	ppm in Article /Homogeneous Material

Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	T2D2*1ZB4A92					
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)
Die	M-011 Other inorganic materials	11.290	mg	supplier	die	Silicon (Si)	7440-21-3		10.900	mg	965442	7899
				supplier	metallization	Aluminium (Al)	7429-90-5		0.148	mg	13108	107
				supplier	Passivation	Silicon Nitride	12033-89-5		0.035	mg	3100	25
				supplier	Passivation	Silicon Oxide	7631-86-9		0.051	mg	4517	37
				supplier	back side metallization	Chromium (Cr)	7440-47-3		0.006	mg	531	4
				supplier	back side metallization	Gold (Au)	7440-57-5		0.015	mg	1328	11
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.051	mg	4517	37
				supplier	polymer die coating	Durimide	Proprietary		0.084	mg	7457	61
Leadframe	M-004 Copper and its alloys	778.632	mg	supplier	alloy	Copper (Cu)	7440-50-8		777.536	mg	998592	563432
				supplier	alloy	Iron (Fe)	7439-89-6		0.779	mg	1000	564
				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.234	mg	301	170
				supplier	metallization	Nickel (Ni)	7440-02-0		0.077	mg	99	56
				supplier	metallization	Phosphorus (P)	7723-14-0		0.006	mg	8	4
Soft solder	Solder	7.368	mg	JIG - R	solder	Lead (Pb)	7439-92-1	7a-Lead in high mel	7.037	mg	955076	5099
				supplier	solder	Silver (Ag)	7440-22-4		0.184	mg	24973	133
				supplier	solder	Tin (Sn)	7440-31-5		0.147	mg	19951	107
				supplier	wire	Aluminium (Al)	7429-90-5		0.903	mg	996689	654
Bonding wires	M-011 Other inorganic materials	0.906	mg	supplier	wire	Magnesium (Mg)	7439-95-4		0.003	mg	3311	2
				supplier	wire							
Encapsulation	M-011 Other inorganic materials	579.315	mg	supplier	mold compound	Silica, vitreous	60676-86-0		466.927	mg	805998	338353
				supplier	mold compound	Epoxy Cresol Novolak	29690-82-2		40.552	mg	70000	29386
				supplier	mold compound	Phenol resin	9003-35-4		23.173	mg	40001	16792
				supplier	mold compound	Biphenyl epoxy resin	85954-11-6		34.759	mg	60000	25188
				supplier	mold compound	Antimony Trioxide	1309-64-4		6.952	mg	12000	5038
				supplier	mold compound	Brominated Epoxy Resin	40039-93-8		4.055	mg	7000	2938
				supplier	mold compound	Carbon black	1333-86-4		2.897	mg	5001	2099
Connections coating	Solder	2.489	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		2.489	mg	1000000	1804