



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 *	2018-01-31
Contact Name *	Refer to Supplier Comment section	Contact Email *	Refer to Supplier Comment section
Contact Phone *	Refer to Supplier Comment section	Authorized Representative *	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
TS420-600H	BGIK*PSG046Q	A	998G	2018-01-31
	Amount	UoM	Unit type	ST ECOPACK Grade
	310	mg	Each	ECOPACK2

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

Package Designator	Size	Nbr of instances	Shape	
DIP	6.1-6.5-2.3	3	Through-hole	
Comment	IPAK TO-251			

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)
7c-I	Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g. piezoelectronic devices, or in a glass or ceramic matrix compound

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	0.02	Die	65
Lead	1.89	Soft solder	6084
Lead-Borate Glass	0.26	Die Glass coating	835

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	BGIK*PSG046Q					
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	1.618	mg	supplier	die	Silicon (Si)	7440-21-3		1.268	mg	783684	4090
				supplier	metallization	Aluminium (Al)	7429-90-5		0.044	mg	27194	142
				supplier	metallization	Gold (Au)	7440-57-5		0.005	mg	3090	16
				supplier	metallization	Nickel (Ni)	7440-02-0		0.008	mg	4944	26
				supplier	Passivation	Silicon Oxide	7631-86-9		0.012	mg	7417	39
				supplier	back side metallization	Aluminium (Al)	7429-90-5		0.007	mg	4326	23
				supplier	back side metallization	Gold (Au)	7440-57-5		0.003	mg	1854	10
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.012	mg	7417	39
				JIG - R & California 65	glass coating	Lead-Borate Glass	65997-18-4	7c-I-Electrical and e	0.259	mg	160074	835
				Leadframe	M-004 Copper and its alloys	181.733	mg	supplier	alloy	Copper (Cu)	7440-50-8	
supplier	alloy	Iron (Fe)	7439-89-6						0.182	mg	1001	587
supplier	alloy	Iron Phosphide (FeP)	26508-33-8						0.055	mg	303	177
JIG - R	solder	Lead (Pb)	7439-92-1					7a-Lead in high mel	1.627	mg	954812	5248
Soft solder	Solder	1.704	mg	supplier	solder	Silver (Ag)	7440-22-4		0.043	mg	25235	139
				supplier	solder	Tin (Sn)	7440-31-5		0.034	mg	19953	110
				supplier	wire	Aluminium (Al)	7429-90-5		0.219	mg	1000000	706
Encapsulation	M-011 Other inorganic materials	121.023	mg	supplier	mold compound	Silica, vitreous	60676-86-0		105.290	mg	870000	339645
				supplier	mold compound	Epoxy resin	25068-38-6		12.102	mg	99998	39039
				supplier	mold compound	Phenol resin	29690-82-2		3.026	mg	25004	9761
				supplier	mold compound	Carbon Black	1333-86-4		0.605	mg	4998	1952
Connections coating	Solder	3.703	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		3.703	mg	1000000	11945