



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 *	2017-02-21
Contact Name *	Refer to Supplier Comment section		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

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
BTB04-600SL	7HDZ*ZAG046S	A	3068	2017-02-21
	Amount	UoM	Unit type	ST ECOPACK Grade
	1900.00	mg	Each	ECOPACK2

Manufacturing information				
J-STD-020 MSL Rating	Classification Temp	Nbr of Reflow Cycles		
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	
SIP	10-9.1-4.5	3	THROUGH HOLE	
Comment	TO 220 AB NON ISOL			

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. piezoelectric devices, or in a glass or ceramic matrix compound

Query : California Prop65 list, dated 27th January 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	0.51	die back side metal	267
Lead	2.49	soft solder	1313
Lead-Borate Glass	0.40	glass coating	212

QueryList : REACH-12th January 2017				
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

Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	7HDZ*ZAG046S					
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	2.508	mg	supplier	die	Silicon (Si)	7440-21-3		1.977	mg	788278	1041
				supplier	metallization	Aluminium (Al)	7429-90-5		0.069	mg	27512	36
				supplier	metallization	Gold (Au)	7440-57-5		0.008	mg	3190	4
				supplier	Passivation	Silicon Oxide	7631-86-9		0.018	mg	7176	9
				supplier	back side metallization	Aluminium (Al)	7429-90-5		0.011	mg	4386	6
				supplier	back side metallization	Gold (Au)	7440-57-5		0.004	mg	1595	2
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.018	mg	7177	9
				JIG - R	glass coating	Lead-Borate Glass	65997-18-4	7c-I-Electrical and e	0.403	mg	160686	212
Leadframe	Copper & its alloys	1253.535	mg	supplier	alloy	Copper (Cu)	7440-50-8		1251.752	mg	998578	658817
				supplier	alloy	CopperPhosphorous (CuP)	12517-41-8		1.253	mg	1000	659
				supplier	metallization	Nickel (Ni)	7440-02-0		0.490	mg	391	258
				supplier	metallization	Phosphorus (P)	7723-14-0		0.040	mg	31	21
Soft solder	Solder	2.611	mg	JIG - R	solder	Lead (Pb)	7439-92-1	7a-Lead in high me	2.494	mg	955190	1313
				supplier	solder	Silver (Ag)	7440-22-4		0.065	mg	24895	34
				supplier	solder	Tin (Sn)	7440-31-5		0.052	mg	19915	27
Bonding wires	Other inorganic materials	1.471	mg	supplier	wire	Aluminium (Al)	7429-90-5		1.471	mg	1000000	774
				supplier								
Encapsulation	Other Organic Materials	633.513	mg	supplier	mold compound	Silica, vitreous	60676-86-0		551.156	mg	870000	290082
				supplier	mold compound	Epoxy resin	25068-38-6		63.351	mg	100000	33343
				supplier	mold compound	Phenol resin	29690-82-2		15.838	mg	25000	8336
				supplier	mold compound	Carbon Black	1333-86-4		3.168	mg	5000	1669
Connections coating	Solder	6.362	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		6.362	mg	1000000	3348