



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 *	2017-10-20
Contact Name *	Refer to Supplier Comment section		Refer to Supplier Comment section
Authorized Representative *	Giovanni Giacopello	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 omprehensive 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
STGD20N45LZAG	XMDP*SZC4A62	A	3068	2017-10-20
Amount	UoM	Unit type	ST ECOPACK Grade	
330.00	mg	Each	ECOPACK1	

Manufacturing information				
J-STD-020 MSL Rating	Classification Temp	Nbr of Reflow Cycles		 life.augmented
1	260	3		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
NA	Tin (Sn), matte	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
SIP	6.5-6.1-2.3	3	GULL WING	
Comment	TO 252 DPAK			

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)

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	0.14	Die - Leadframe	436
Lead	7.19	Soft solder	21794
Antimony trioxide	1.73	Encapsulation	5242

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	XMDP [®] SZC4A62					
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	11.579	mg	supplier	die	Silicon (Si)	7440-21-3		11.401	mg	984627	34548
				supplier	metallization	Aluminium (Al)	7429-90-5		0.071	mg	6132	215
				supplier	Passivation	Silicon Oxide	7631-86-9		0.031	mg	2677	94
				supplier	back side metallization	Chromium (Cr)	7440-47-3		0.006	mg	518	18
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.052	mg	4491	158
				supplier	back side metallization	Silver (Ag)	7440-22-4		0.018	mg	1555	55
Leadframe	Copper & its alloys	165.043	mg	supplier	alloy	Copper (Cu)	7440-50-8		164.152	mg	994601	497430
				supplier	alloy	CopperPhosphorous (CuP)	12517-41-8		0.330	mg	1999	1000
				supplier	alloy	Cobalt (Co)	7440-48-4		0.462	mg	2799	1400
				supplier	metallization	Nickel (Ni)	7440-02-0		0.092	mg	559	279
				supplier	metallization	Phosphorus (P)	12185-10-3		0.007	mg	42	21
				supplier	solder	Lead (Pb)	7439-92-1	7a-Lead in high me	7.192	mg	954986	21794
Soft solder	Solder	7.531	mg	JIG - R	solder	Silver (Ag)	7440-22-4		0.188	mg	24963	570
				supplier	solder	Tin (Sn)	7440-31-5		0.151	mg	20050	458
				supplier	wire	Aluminium (Al)	7429-90-5		0.545	mg	996344	1652
Bonding wires	Other inorganic materials	0.547	mg	supplier	wire	Magnesium (Mg)	7439-95-4		0.002	mg	3656	6
				supplier	Other Organic Materials	Silica, vitreous	60676-86-0		116.270	mg	806003	352333
				supplier	mold compound	Epoxy Cresol Novolak	29690-82-2		10.098	mg	70001	30600
				supplier	mold compound	Phenol resin	9003-35-4		5.770	mg	39999	17485
				supplier	mold compound	Biphenyl epoxy resin	85954-11-6		8.655	mg	59998	26227
				supplier	mold compound	Antimony Trioxide	1309-64-4		1.731	mg	12000	5245
Encapsulation	Other Organic Materials	144.255	mg	supplier	mold compound	Brominated Epoxy Resin	40039-93-8		1.010	mg	7001	3061
				supplier	mold compound	Carbon black	1333-86-4		0.721	mg	4998	2185
				supplier	solder alloy	Tin (Sn)	7440-31-5		1.045	mg	1000000	3167
				supplier	solder alloy	Tin (Sn)	7440-31-5		1.045	mg	1000000	3167