



## Materials Declaration Form

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

*\* : Required Field*

Supplier Information			
<b>Company Name *</b>	<b>STMicroelectronics</b>	<b>Response Date *</b>	<b>2020-04-16</b>
<b>Company Unique ID</b>	<b>NL 008751171B01</b>		
<b>Contact Name *</b>	Refer to Supplier Comment section		Refer to Supplier Comment section
<b>Contact Phone *</b>	Refer to Supplier Comment section	<b>Contact Email *</b>	Refer to Supplier Comment section
<b>Authorized Representative *</b>	<b>giovanni giacopello</b>	<b>Representative Title</b>	<b>ADG MD CHAMPION</b>
<b>Representative Phone *</b>	Refer to Supplier Comment section	<b>Representative Email *</b>	Refer to Supplier Comment section
<b>Supplier Comment</b>	Online Technical Support - STMicroelectronics : <a href="http://www.st.com/web/en/support/support.html">http://www.st.com/web/en/support/support.html</a>		

**Uncertainty Statement**

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**Legal Statement**

<b>Supplier Acceptance *</b>	<b>true</b>	<b>Legal Declaration *</b>	<b>Standard</b>
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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
STGF19NC60KD	XDFP*KV65962	A	3068	2020-04-16
	Amount	UoM	Unit type	ST ECOPACK Grade
	1690	mg	Each	ECOPACK 2
Comment	ECOPACK® 2 is STMicroelectronics trade name for ROHS compliant device without Brominated and Chlorinated compound (900ppm) and without Antimony oxide flame retardant ( in each organic material)			

Manufacturing information				
J-STD-020 MSL Rating	Classification Temp	Nbr of Reflow Cycles		
Not Applicable	Not Applicable	3		
Bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
Not Applicable	Tin (Sn), matte, annealed	Copper Alloy	DM00622054	



Package Designator	Size	Nbr of instances	Shape	
SIP	10.20,16.15,4.50	3	Through hole	
Comment	TO 220 ISO FULL PACK IN LINE			

QueryList : RoHS Directive 2011/65/EU-July 2011 – Annex II amended by Directive 2015/863-March 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 : ELV directive : 2000/53/EC amended 2017/2096 _November 2017	
Query	Response
1 - Product(s) meets EU ELV requirements without any exemptions	FALSE
2 - Product(s) meets EU RoHS requirements by application of the selected exemption(s)	TRUE
Exemption Id.	Description
8e	Lead in high melting temperature type solders (i.e. lead-based alloys containing 85 % by weight or more lead)

QueryList : California Prop65 list, dated 3rd January 2020			
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	1.01	die - Leadframe	596
Lead	7.27	soft solder	4303

QueryList : REACH-16th January 2020				
Query				Response
1 - Product(s) does not contain REACH Substances Of Very High Concern above the limits per the definition within REACH				FALSE
CategoryLevel_Name	CategoryLevel_Threshold	amount in product (mg)	Application	ppm in product
Lead	1000 ppm	7.27	Soft solder	4303
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				FALSE
CategoryLevel_Name	CategoryLevel_Threshold	Amount in Embedded Article / Homogeneous Material (mg)	Application - Article / Homogeneous Material	ppm in Article /Homogeneous Material
Lead	1000 ppm	7.272	Soft solder	955083

Material Composition Declaration :						Mfr Item Name	XDFP*KV65962					
note : Substance present with less 0.001mg will not be declared in this document												
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)
Dies	M-011 Other inorganic materials	19.335	mg	supplier	die	Silicon(Si)	7440-21-3		18.633	mg	963693	11025
				supplier	metallisation	Aluminium(Al)	7429-90-5		0.285	mg	14740	168
				supplier	metallisation	Chromium(Cr)	7440-47-3		0.008	mg	414	5
				supplier	metallisation	Gold(Au)	7440-57-5		0.005	mg	259	3
				supplier	metallisation	Nicel(Ni)	7440-02-0		0.093	mg	4810	55
				supplier	metallisation	Silver(Ag)	7440-22-4		0.025	mg	1293	15
				supplier	metallisation	Titanium(Ti)	7440-32-6		0.002	mg	103	1
				supplier	Passivation	Silicon nitride(SiN)	12033-89-5		0.049	mg	2534	29
				supplier	passivation	Silicon oxide	7631-86-9		0.117	mg	6051	69
Leadframe	M-004 Copper and its alloys	606.263	mg	supplier	polymer coating	Durimide	proprietary		0.118	mg	6103	70
				supplier	alloy & coating	Copper(Cu)	7440-50-8		604.469	mg	997041	357674
				supplier	alloy & coating	Nicel(Ni)	7440-02-0		0.915	mg	1509	541
				supplier	alloy & coating	Iron(Fe)	7439-89-6		0.605	mg	998	358
				supplier	alloy & coating	Iron Phosphide(FeP)	26508-33-8		0.182	mg	300	108
Soft solder	Solder	7.614	mg	SVHC	alloy & coating	Phosphorus metal	7723-14-0		0.092	mg	152	54
				supplier	solder	Lead(Pb)	7439-92-1	7a-Lead in high melting temper	7.272	mg	955083	4303
				supplier	solder	Silver(Ag)	7440-22-4		0.190	mg	24954	112
Bonding wires	M-003 Aluminum and its alloys	0.780	mg	supplier	solder	Tin(Sn)	7440-31-5		0.152	mg	19963	90
				supplier	wire	Aluminium (Al)	7429-90-5		0.780	mg	1000000	462
Bonding wires 2	M-003 Aluminum and its alloys	0.308	mg	supplier	wire	Aluminium (Al)	7429-90-5		0.306	mg	993506	181
Encapsulation	M-011 Other inorganic materials	1049.834	mg	supplier	wire	Magnesium (Mg)	7439-95-4		0.002	mg	6494	1
				supplier	mold compound	Quartz	14808-60-7		734.884	mg	700000	434843
				supplier	mold compound	Silica vitreous	60676-86-0		78.738	mg	75000	46591
				supplier	mold compound	Epoxy type resin	proprietary		146.977	mg	140000	86969
				supplier	mold compound	Phenol type resin	proprietary		73.488	mg	70000	43484
connections coating	Solder	5.866	mg	supplier	mold compound	Metal hydroxide	proprietary		10.498	mg	10000	6212
				supplier	mold compound	Carbon black	1333-86-4		5.249	mg	5000	3106
				supplier	solder alloy	Tin (Sn)	7440-31-5		5.866	mg	1000000	3471