



## 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>2020-03-17</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**

While STMicroelectronics has endeavored to provide information which is accurate and up to date, this document and its contents are provided on a strict 'as is' and 'as available' basis. STMicroelectronics disclaims all warranties, express or implied related to this document and its contents, including but not limited to implied warranties of completeness, truth, accuracy, merchantability, fitness for a particular purpose and non-infringement. ST shall have no responsibility and assumes no liability for any cost, loss or damage of any kind which could arise, directly or indirectly, from the use or inability to use this document and/or its contents.

**Legal Statement**

<b>Supplier Acceptance *</b>	<b>true</b>	<b>Legal Declaration *</b>	<b>Standard</b>
------------------------------	-------------	----------------------------	-----------------

**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
STGB15H60DF	XDD2*EI64R82	A	3068	2020-03-17
	Amount	UoM	Unit type	ST ECOPACK Grade
	1380	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		
1	245	3		
Bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
Not Applicable	Tin (Sn), matte, annealed	Copper Alloy	DM00687063	



Package Designator	Size	Nbr of instances	Shape	
SIP	10.20,9.15,4.50	3	gull wing	
Comment	D2PAK			

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	0.16	die - leadframe	114
Lead	4.27	soft solder	3095

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	4.27	Soft solder	3095
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	4.271	Soft solder	955054







Material Composition Declaration :						Mfr Item Name	XDD2*E164R82					
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)
Die	M-011 Other inorganic materials	5.509	mg	supplier	die	Silicon(Si)	7440-21-3		5.083	mg	922672	3683
				supplier	metallisation	Aluminium(Al)	7429-90-5		0.178	mg	32311	129
				supplier	metallisation	Gold(Au)	7440-57-5		0.003	mg	545	4
				supplier	metallisation	Nicke(Ni)	7440-02-0		0.052	mg	9439	38
				supplier	metallisation	Silver(Ag)	7440-22-4		0.015	mg	2723	11
				supplier	metallisation	Titanium(Ti)	7440-32-6		0.004	mg	725	3
				supplier	metallisation	Vanadium(V)	7440-62-2		0.003	mg	545	2
				supplier	Passivation	Silicon nitride(SiN)	12033-89-5		0.028	mg	5083	20
				supplier	passivation	Silicon oxide	7631-86-9		0.075	mg	13614	54
				supplier	polymer coating	Durimide	proprietary		0.068	mg	12343	49
Leadframe	M-004 Copper and its alloys	778.660	mg	supplier	alloy & coating	Copper(Cu)	7440-50-8		777.532	mg	998551	563429
				supplier	alloy & coating	Nicke(Ni)	7440-02-0		0.105	mg	135	76
				supplier	alloy & coating	Iron(Fe)	7439-89-6		0.358	mg	460	259
				supplier	alloy & coating	Iron Phosphide(FeP)	26508-33-8		0.654	mg	840	474
				supplier	alloy & coating	Phosphorus metal	7723-14-0		0.011	mg	14	8
Soft solder	Solder	4.472	mg	SVHC	solder	Lead(Pb)	7439-92-1	7a-Lead in high melting temper	4.271	mg	955054	3095
				supplier	solder	Silver(Ag)	7440-22-4		0.112	mg	25045	81
				supplier	solder	Tin(Sn)	7440-31-5		0.089	mg	19901	64
Bonding wires	M-003 Aluminum and its alloys	2.894	mg	supplier	wire	Aluminium (Al)	7429-90-5		2.894	mg	1000000	2097
Bonding wires 2	M-003 Aluminum and its alloys	0.132	mg	supplier	wire	Aluminium (Al)	7429-90-5		0.131	mg	992424	95
Encapsulation	M-011 Other inorganic materials	585.844	mg	supplier	wire	Magnesium (Mg)	7439-95-4		0.001	mg	7576	1
				supplier	mold compound	Silica vitreous	60676-86-0		512.614	mg	875001	371459
				supplier	mold compound	Biphenyl epoxy resin	85954-11-6		23.434	mg	40000	16981
				supplier	mold compound	Epoxy type resin	proprietary		17.575	mg	29999	12736
				supplier	mold compound	Phenol type resin	proprietary		29.292	mg	50000	21226
connections coating	Solder	2.489	mg	supplier	mold compound	Carbon black	1333-86-4		2.929	mg	5000	2122
				supplier	solder alloy	Tin (Sn)	7440-31-5		2.489	mg	1000000	1804