



## Materials Declaration Form

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

Supplier Information			
<b>Company Name *</b>	STMicroelectronics	<b>Response Date *</b>	2018-11-20
<b>Company Unique ID</b>	NL 008751171B01		
<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>	Giovanni Giacopello	<b>Representative Title</b>	ADG MD Champion
<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>	true	<b>Legal Declaration *</b>
		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
STL15N60M2-EP	SHM4*EQ6FB62	A	3068	2018-11-20
	Amount	UoM	Unit type	ST ECOPACK Grade
	90.00	mg	Each	ECOPACK2
	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		 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	
QFN	6-5-1	12	gull wing	
Comment	PowerFLAT 5x6 HV			

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 25th May 2018			
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	0.09	Die	978
Lead	5.72	Soft solder	63533

QueryList : REACH-27th June 2018				
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	5.718	Soft solder	63533
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	5.718	Soft solder	954910

Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	SHM4*EQ6FB62					
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	9.543	mg	supplier	die	Silicon (Si)	7440-21-3		9.244	mg	968668	102711
				supplier	metallization	Aluminium (Al)	7429-90-5		0.121	mg	12679	1344
				supplier	Passivation	Silicon Oxide	7631-86-9		0.053	mg	5554	589
				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.006	mg	630	67
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.088	mg	9221	978
				supplier	back side metallization	Silver (Ag)	7440-22-4		0.031	mg	3248	344
Leadframe	M-004 Copper and its alloys	43.468	mg	supplier	alloy	Copper (Cu)	7440-50-8		42.713	mg	982631	474589
				supplier	alloy	Iron (Fe)	7439-89-6		0.043	mg	989	478
				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.013	mg	299	144
				supplier	metallization	Silver (Ag)	7440-22-4		0.699	mg	16081	7767
				supplier	solder	Lead (Pb)	7439-92-1	7a-Lead in high mel	5.718	mg	954910	63533
Soft solder	Solder	5.988	mg	JIG - R	solder	Silver (Ag)	7440-22-4		0.150	mg	25050	1667
				supplier	solder	Tin (Sn)	7440-31-5		0.120	mg	20040	1333
				supplier	wire	Copper (Cu)	7440-50-8		0.272	mg	1000000	3022
Bonding wires	M-004 Copper and its alloys	0.272	mg	supplier	moltd compound	Silica, vitreous	60676-86-0		28.308	mg	926006	314533
				supplier	moltd compound	epoxy resin	85954-11-6		1.223	mg	40007	13589
				supplier	moltd compound	phenol resin	26834-02-6		0.917	mg	29997	10189
				supplier	moltd compound	carbon black	1333-86-4		0.122	mg	3990	1356
connections coating	Solder	0.159	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		0.159	mg	1000000	1767