



## 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>	2019-05-29
<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>	Rossana Bonaccorso	<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
STL47N60M6	P8CH*BQ6MB6V	A	994X	2019-05-29
	Amount	UoM	Unit type	ST ECOPACK Grade
	180.00	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		 life.augmented
3	260	3		
Bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
Not Applicable	Tin (Sn), matte	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
SOT	8.0,8.0,0.8	4	flat	
Comment	Package: Power FLAT MLPD 8x8 4L			

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)

ELV exemption description			
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	1.09	Die	6033
Lead	8.91	Soft solder	49522

QueryList : REACH-15th January 2019				
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	9.08	Soft solder	49522
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	9.08	Soft solder	954901

Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	P8CH*BQ6M86V					
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	18.156	mg	supplier	die	Silicon (Si)	7440-21-3		16.247	mg	894856	90261
				supplier	metallization	Aluminium (Al)	7429-90-5		0.424	mg	23353	2356
				supplier	metallization	Copper (Cu)	7440-50-8		0.156	mg	8592	867
				supplier	passivation	Nickel (Ni)	7440-02-0		0.931	mg	51278	5172
				supplier	metallization	Silver (Ag)	7440-22-4		0.055	mg	3029	306
				supplier	metallization	Titanium (Ti)	7440-32-6		0.016	mg	881	89
				supplier	Passivation	Silicon Nitride	12033-89-5		0.098	mg	5398	544
				supplier	Passivation	Silicon Oxide	7631-86-9		0.008	mg	441	44
				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.011	mg	606	61
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.155	mg	8537	861
				supplier	back side metallization	Silver (Ag)	7440-22-4		0.055	mg	3029	306
				Leadframe	M-004 Copper and its alloys	76.097	mg	supplier	alloy	Copper (Cu)	7440-50-8	
supplier	alloy	Iron (Fe)	7439-89-6						1.716	mg	22550	9533
supplier	alloy	Phosphorus (P)	12185-10-3						0.019	mg	250	106
supplier	alloy	Zinc (Zn)	7440-66-6						0.096	mg	1262	533
supplier	metallization	Silver (Ag)	7440-22-4						0.761	mg	10000	4228
Soft solder	Solder	9.335	mg	JIG - R	solder	Lead (Pb)	7439-92-1	7a-Lead in high me	8.914	mg	954901	49522
				supplier	solder	Silver (Ag)	7440-22-4		0.234	mg	25067	1300
Bonding wire	M-004 Copper and its alloys	0.418	mg	supplier	solder	Tin (Sn)	7440-31-5		0.187	mg	20032	1039
				supplier	wire	Copper (Cu)	7440-50-8		0.418	mg	1000000	2322
Encapsulation	M-011 Other inorganic materials	71.587	mg	supplier	mold compound	Silica Fused	60676-86-0		67.078	mg	937014	372656
				supplier	mold compound	Epoxy Resin	Proprietary		2.147	mg	29991	11928
				supplier	mold compound	Phenol resin	Proprietary		2.147	mg	29991	11928
				supplier	mold compound	Carbon Black	1333-86-4		0.215	mg	3004	1194
Connection coating	Solder	4.407	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		4.407	mg	1000000	24483