



## 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>	2019-04-29
<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>	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
L9958	G977*UP41AB1	A	0959	2019-04-29
Amount	UoM	Unit type	ST ECOPACK Grade	
1900.00	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	
3	245	3		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
NA	Tin (Sn), matte	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
QFP	15.9-11-3.5	20	gull wing	
Comment	PowerSO 20 .43 SLUG DOWN			

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 23rd November 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
Lead	7.51	Soft solder	3950

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	7.51	Soft solder	3950
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	7.505	Soft solder	974929

Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	G977*UP4LAB1					
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	8.348	mg	supplier	die	Silicon (Si)	7440-21-3		8.034	mg	962386	4228
				supplier	metallization	Aluminium (Al)	7429-90-5		0.200	mg	23958	105
				supplier	Passivation	Silicon Oxide	7631-86-9		0.114	mg	13656	60
Leadframe	M-004 Copper and its alloys	432.528	mg	supplier	alloy	Copper (Cu)	7440-50-8		430.813	mg	996035	226744
				supplier	alloy	Iron (Fe)	7439-89-6		0.431	mg	997	227
				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.129	mg	298	68
Soft solder	Solder	7.698	mg	JIG - R	solder	metallization	Silver (Ag)	7440-22-4	1.155	mg	2670	608
				supplier	solder	Lead (Pb)	7439-92-1	7a-Lead in high mel	7.505	mg	974929	3950
				supplier	solder	Silver (Ag)	7440-22-4		0.116	mg	15068	63
Bonding wires	M-008 Precious metals	3.938	mg	supplier	solder	Tin (Sn)	7440-31-5		0.077	mg	10003	41
	supplier			wire	Gold (Au)	7440-57-5		3.437	mg	872778	1809	
	M-004 Copper and its alloys			supplier	wire	Copper (Cu)	7440-50-8		0.487	mg	123667	256
Encapsulation	M-011 Other inorganic materials	1443.349	mg	supplier	wire	Palladium (Pd)	7440-05-3		0.010	mg	2539	5
				supplier	wire	Platinumium (Pt)	7440-06-4		0.004	mg	1016	2
				supplier	mold compound	silica vitreous	60676-86-0		1267.260	mg	878000	666979
connections coating	Solder	4.139	mg	supplier	mold compound	Biphenyl epoxy resin	85954-11-6		86.601	mg	60000	45579
				supplier	mold compound	Phenol Resin	205830-20-2		57.734	mg	40000	30386
				supplier	mold compound	epoxy resin	25068-38-6		28.867	mg	20000	15193
				supplier	mold compound	carbon black	1333-86-4		2.887	mg	2000	1519
				supplier	solder alloy	Tin (Sn)	7440-31-5		4.139	mg	1000000	2178