



## 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>	2019-01-31
<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 Giapello	<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
STD65N3LLH5	TLDP*5H3BB52	A	3068	2019-01-31
Amount	UoM	Unit type	ST ECOPACK Grade	
330.00	mg	Each	ECOPACK1	
	Comment	ECOPACK® or ECOPACK® 1 is STMicroelectronics trade name for ROHS compliant devices		

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	
SIP	6.5-6.1-2.3	3	GULL WING	
Comment	TO 252 DPAK			

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
Nickel	0.11	Die - Leadframe	330
Lead	2.38	Soft solder	7218
Antimony trioxide	1.90	Encapsulation	5758

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	2.382	Soft solder	7218
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	2.382	Soft solder	955092

Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	TLPD*5H3B852					
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	1.953	mg	supplier	die	Silicon (Si)	7440-21-3		1.764	mg	903226	5345
				supplier	metallization	Aluminium (Al)	7429-90-5		0.122	mg	62468	370
				supplier	metallization	Titanium (Ti)	7440-32-6		0.006	mg	3072	18
				supplier	metallization	Tungsten (W)	7440-33-7		0.001	mg	512	3
				supplier	Passivation	Silicon Nitride	12033-89-5		0.001	mg	512	3
				supplier	Passivation	Silicon Oxide	7631-86-9		0.035	mg	17921	106
				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.001	mg	512	3
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.017	mg	8705	52
				supplier	back side metallization	Silver (Ag)	7440-22-4		0.006	mg	3072	18
				supplier	alloy	Copper (Cu)	7440-50-8		164.730	mg	998097	499182
Leadframe	M-004 Copper and its alloys	165.044	mg	supplier	alloy	Iron (Fe)	7439-89-6		0.165	mg	1000	500
				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.050	mg	304	152
				supplier	metallization	Nickel (Ni)	7440-02-0		0.092	mg	557	279
				supplier	metallization	Phosphorus (P)	7723-14-0		0.007	mg	42	21
				supplier	solder	Lead (Pb)	7439-92-1	7a-Lead in high mel	2.382	mg	955092	7218
Soft solder	Solder	2.494	mg	supplier	solder	Silver (Ag)	7440-22-4		0.062	mg	24860	187
				supplier	solder	Tin (Sn)	7440-31-5		0.050	mg	20048	152
				supplier	wire	Aluminium (Al)	7429-90-5		1.005	mg	996036	3045
Bonding wires	M-003 Aluminum and its alloys	1.009	mg	supplier	wire	Magnesium (Mg)	7439-95-4		0.004	mg	3964	12
				supplier	wire							
Encapsulation	M-011 Other inorganic materials	158.455	mg	supplier	mold compound	Silica, vitreous	60676-86-0		127.715	mg	806002	387015
				supplier	mold compound	Epoxy Cresol Novolak	29690-82-2		11.092	mg	70001	33612
				supplier	mold compound	Phenol resin	9003-35-4		6.338	mg	39999	19206
				supplier	mold compound	Biphenyl epoxy resin	85954-11-6		9.507	mg	59998	28809
				supplier	mold compound	Antimony Trioxide	1309-64-4		1.902	mg	12003	5764
				supplier	mold compound	Brominated Epoxy Resin	40039-93-8		1.109	mg	6999	3361
				supplier	mold compound	Carbon black	1333-86-4		0.792	mg	4998	2400
				supplier	solder alloy	Tin (Sn)	7440-31-5		1.045	mg	1000000	3167
connections coating	Solder	1.045	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		1.045	mg	1000000	3167