



## 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>	2018-10-08
<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
MJD117T4	TODP*BD02T6F	A	998G	2018-10-08
Amount	UoM	Unit type	ST ECOPACK Grade	
330.00	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	
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 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	1.12	Die - Leadframe	3391
Lead	1.61	Soft solder	4864

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	1.605	Soft solder	4864
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	1.605	Soft solder	925072

Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	TODP*BD0276F					
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	1.487	mg	supplier	die	Silicon (Si)	7440-21-3		1.404	mg	944183	4255
				supplier	metallization	Aluminium (Al)	7429-90-5		0.042	mg	28245	127
				supplier	Passivation	Silicon Oxide	7631-86-9		0.024	mg	16140	73
				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.001	mg	672	3
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.012	mg	8070	36
				supplier	back side metallization	Silver (Ag)	7440-22-4		0.004	mg	2690	12
Leadframe	M-004 Copper and its alloys	166.051	mg	supplier	alloy	Copper (Cu)	7440-50-8		164.729	mg	992039	499179
				supplier	alloy	Iron (Fe)	7439-89-6		0.165	mg	993	498
				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.050	mg	301	152
				supplier	metallization	Nickel (Ni)	7440-02-0		1.107	mg	6667	3355
Soft solder	Solder	1.735	mg	JIG - R	solder	Lead (Pb)	7439-92-1	7a-Lead in high mel	1.605	mg	925072	4864
				supplier	solder	Tin (Sn)	7440-31-5		0.087	mg	50144	264
				supplier	solder	Silver (Ag)	7440-22-4		0.043	mg	24784	130
Bonding wires	M-003 Aluminum and its alloys	0.185	mg	supplier	wire	Aluminium (Al)	7429-90-5		0.185	mg	1000000	561
Encapsulation	M-011 Other inorganic materials	159.497	mg	supplier	mold compound	Silica Fused	60676-86-0		121.217	mg	759995	367324
				supplier	mold compound	Silica amorphous	7631-86-9		11.324	mg	70998	34315
				supplier	mold compound	Epoxy resin.	Proprietary		15.950	mg	100002	48333
				supplier	mold compound	Phenolic Resin	Proprietary		6.380	mg	40002	19333
				supplier	mold compound	Flame Retardant	Proprietary		3.190	mg	20000	9667
connections coating	Solder	1.045	mg	supplier	solder alloy	Carbon Black	1333-86-4		1.436	mg	9003	4352
						Tin (Sn)	7440-31-5		1.045	mg	1000000	3167