



## 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>	2018-06-21
<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**


While STMicroelectronics has endeavored to provide information which is accurate and up to date, this document and its contents are provided on a strict 'as is' and 'as available' basis. STMicroelectronics disclaims all warranties, express or implied related to this document and its contents, including but not limited to implied warranties of completeness, truth, accuracy, merchantability, fitness for a particular purpose and non-infringement. ST shall have no responsibility and assumes no liability for any cost, loss or damage of any kind which could arise, directly or indirectly, from the use or inability to use this document and/or its contents.

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
STGWA20M65DF2	TDWT*KLFET5F	A	998G	2018-06-21
	Amount	UoM	Unit type	ST ECOPACK Grade
	6180.00	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
Not Applicable	Not Applicable	Not Applicable		
Bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
Not Applicable	Tin (Sn), matte, annealed	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
SIP	21 - 15.8 - 5	3	Through-hole	
Comment	TO-247 LONG LEADS			

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			TRUE
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)			FALSE
4 - Product(s) does not meet EU RoHS requirements and is not under exemptions			FALSE
Exemption Id.	Description		

QueryList : ELV directive : 2000/53/EC amended 2017/2096 _November 2017			
Query			Response
1 - Product(s) meets EU ELV requirements without any exemptions			TRUE
2 - Product(s) meets EU RoHS requirements by application of the selected exemption(s)			FALSE
Exemption Id.	Description		

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	1.19	Die - Leadframe	193

QueryList : REACH-15th January 2018				
Query				Response
1 - Product(s) does not contain REACH Substances Of Very High Concern above the limits per the definition within REACH				TRUE
CategoryLevel_Name	CategoryLevel_Threshold	amount in product (mg)	Application	ppm in product
-	-			0
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				TRUE
CategoryLevel_Name	CategoryLevel_Threshold	Amount in Embedded Article / Homogeneous Material (mg)	Application - Article / Homogeneous Material	ppm in Article /Homogeneous Material
-	-	0.00		

Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	TDWT*KLFTSF					
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	5.061	mg	supplier	die	Silicon (Si)	7440-21-3		4.599	mg	908714	744
				supplier	metallization	Aluminium (Al)	7429-90-5		0.233	mg	46038	38
				supplier	Passivation	Silicon Nitride	12033-89-5		0.037	mg	7312	6
				supplier	Passivation	Silicon Oxide	7631-86-9		0.099	mg	19561	16
				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.005	mg	988	1
				supplier	back side metallization	Gold (Au)	7440-57-5		0.016	mg	3161	3
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.068	mg	13436	11
Leadframe	M-004 Copper and its alloys	4050.788	mg	supplier	back side metallization	Vanadium (V)	7440-62-2		0.004	mg	790	1
				supplier	alloy	Copper (Cu)	7440-50-8		4044.397	mg	998422	654433
				supplier	alloy	Iron (Fe)	7439-89-6		4.053	mg	1001	653
				supplier	alloy	Phosphorus metal	7723-14-0		1.215	mg	300	197
				supplier	metallization	Nickel (Ni)	7440-02-0		1.123	mg	277	182
				supplier	solder	Tin(Sn)	7440-31-5		2.470	mg	650171	400
				supplier	solder	Silver(Ag)	7440-22-4		0.949	mg	249803	154
Soft solder	Solder	3.799	mg	supplier	solder	Antimony	7440-36-0		0.380	mg	100026	61
				supplier	wire	Aluminium (Al)	7429-90-5		4.956	mg	1000000	802
				supplier	mold compound	Epoxy resin	29690-82-2		145.364	mg	70000	23522
Bonding wires	M-003 Aluminum and its alloys	4.956	mg	supplier	mold compound	Phenol resin	9003-35-4		51.916	mg	25000	8401
				supplier	mold compound	Silica	60676-86-0		1557.486	mg	750002	252020
				supplier	mold compound	Metal hydroxide	21645-51-2		311.495	mg	149999	50404
				supplier	mold compound	Carbon black	1333-86-4		10.382	mg	4999	1680
				supplier	solder	Tin (Sn)	7440-31-5		38.753	mg	1000000	6271
Encapsulation	M-011 Other inorganic materials	2076.643	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		38.753	mg	1000000	6271
connections coating	Solder	38.753	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		38.753	mg	1000000	6271