



Materials Declaration Form

IPC Form Type *	1752 Distribute	Version	2
Sectionals *	Material Info Manufacturing Info	Subsectionals *	A-D <i>* : Required Field</i>

Supplier Information			
Company Name *	STMicroelectronics	Response Date *	2019-03-15
Company Unique ID	NL 008751171B01		
Contact Name *	Refer to Supplier Comment section		Refer to Supplier Comment section
Contact Phone *	Refer to Supplier Comment section	Contact Email *	Refer to Supplier Comment section
Authorized Representative *	Giovanni Giacobello	Representative Title	ADG MD CHAMPION
Representative Phone *	Refer to Supplier Comment section	Representative Email *	Refer to Supplier Comment section
Supplier Comment	Online Technical Support - STMicroelectronics : http://www.st.com/web/en/support/support.html		

Uncertainty Statement


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Legal Statement		
Supplier Acceptance *	true	Legal Declaration *
		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
STGWA60V60DWFAG	TDWT*EVF7A5F	A	Z8GA	2019-03-15
	Amount	UoM	Unit type	ST ECOPACK Grade
	6100.00	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	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
SIP	15.75X20.15X5.15	3	Through-hole	
Comment	Package: 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 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	1.29	Die - Leadframe	212

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				TRUE
CategoryLevel_Name	CategoryLevel_Threshold	amount in product (mg)	Application	ppm in product
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

Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	TDWT*EVF7A5F									
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)				
Dies	M-011 Other inorganic materials	9.832	mg	supplier	die	Silicon (Si)	7440-21-3		5.051	mg	513731	828				
				supplier	die	Silicium carbide	409-21-2		3.745	mg	380899	614				
				supplier	metallization	Aluminium (Al)	7429-90-5		0.443	mg	45057	73				
				supplier	metallization	Gold (Au)	7440-57-5		0.006	mg	610	1				
				supplier	passivation	Nickel (Ni)	7440-02-0		0.033	mg	3356	5				
				supplier	metallization	Silver (Ag)	7440-22-4		0.072	mg	7323	12				
				supplier	metallization	Titanium (Ti)	7440-32-6		0.002	mg	203	0				
				supplier	metallization	Titanium Nitride	25583-20-4		0.003	mg	306	0				
				supplier	Passivation	Silicon Nitride	12033-89-5		0.095	mg	9662	16				
				supplier	Passivation	Silicon Oxide	7631-86-9		0.140	mg	14239	23				
				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.012	mg	1221	2				
				supplier	back side metallization	Gold (Au)	7440-57-5		0.006	mg	610	1				
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.148	mg	15053	24				
				supplier	back side metallization	Vanadium (V)	7440-62-2		0.009	mg	915	1				
				supplier	back side metallization	Silver (Ag)	7440-22-4		0.049	mg	4984	8				
				supplier	polymer die coating	PIX1 Gamma-butyrolactone	96-48-0		0.018	mg	1831	3				
				Leadframe	Copper & its alloys	3994.796	mg	supplier	alloy	Copper(CU)	7440-50-8		3989.601	mg	998700	654033
								supplier	alloy	Iron (Fe)	7439-89-6		3.995	mg	1000	653
								supplier	alloy	Phosphorus(P)	12185-10-3		0.090	mg	23	15
								supplier	metallization	Nickel (Ni)	7440-02-0		1.110	mg	277	182
Solder paste	Solder	3.750	mg	supplier	solder	Tin(Sn)	7440-31-5		2.437	mg	649867	400				
				supplier	solder	Silver(Ag)	7440-22-4		0.937	mg	249867	154				
				supplier	solder	Antimony	7440-36-0		0.376	mg	100266	62				
Bonding wires	Other organic materials	4.888	mg	supplier	wire	Aluminium (Al)	7429-90-5		4.888	mg	1000000	801				
Encapsulation	Other organic materials	2048.507	mg	supplier	mold compound	Epoxy resin	29690-82-2		143.396	mg	70000	23508				
				supplier	mold compound	Phenol resin	9003-35-4		51.213	mg	25000	8396				
				supplier	mold compound	Silica	60676-86-0		1536.380	mg	750000	251866				
				supplier	mold compound	Metal hydroxide	21645-51-2		307.275	mg	150000	50373				
				supplier	mold compound	Carbon black	1333-86-4		10.243	mg	5000	1679				
Connection coating	Solder	38.227	mg	supplier	solder alloy	Tin(Sn)	7440-31-5		38.227	mg	1000000	6267				