



Materials Declaration Form

IPC Form Type *	1752 Distribute	Version	2
Sectionals *	Material Info Manufacturing Info	Subsectionals *	A-D

** : Required Field*

Supplier Information			
Company Name *	STMicroelectronics	Response Date *	2020-11-10
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 giacopello	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
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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
STGFW20V60DF	TDLZ*EVFET5S	A	994L	2020-11-10
	Amount	UoM	Unit type	ST ECOPACK Grade
	5200	mg	Each	ECOPACK 1
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
Not Applicable	Not Applicable	3		
Bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
Not Applicable	Tin (Sn), matte, annealed	Copper Alloy	CD00363908	

Package Designator	Size	Nbr of instances	Shape	
Not Applicable	15.50,14.50,5.70	3	shape	
Comment	TO-3PF/ISOWATT 218			

QueryList : RoHS Directive 2011/65/EU-July 2011 Annex II amended by Delegated 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 2020/363_ March 2020	
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 3rd January 2020			
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	0.82	die - leadframe	158
Lead	5.66	soft solder	1088
Antimony trioxide	56.32	encapsulation	10831

QueryList : REACH-25th June 2020				
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	5.66	Soft solder	1088
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	5.657	Soft solder	954929

Responsible metals sourcing	
Query	Response
The component is containing at least one of the following metals : Cobalt , Gold , Tantalum , Tin , Tungsten.	true
The following metals are present is the component :	Gold, Tin,
This product is in the scope of the responsible metals sourcing, its compliance is covered by our company processes .	

Material Composition Declaration :						Mfr Item Name	TDLZ*EVFETSS					
note : Substance present with less 0.001mg will not be declared in this document												
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	7.579	mg	supplier	die	Silicon(Si)	7440-21-3		6.985	mg	921624	1343
				supplier	metallisation	Aluminium(Al)	7429-90-5		0.249	mg	32854	48
				supplier	metallisation	Gold(Au)	7440-57-5		0.005	mg	660	1
				supplier	metallisation	Nicke(Ni)	7440-02-0		0.072	mg	9500	14
				supplier	metallisation	Silver(Ag)	7440-22-4		0.020	mg	2639	4
				supplier	metallisation	Titanium(Ti)	7440-32-6		0.006	mg	792	1
				supplier	metallisation	Vanadium(V)	7440-62-2		0.004	mg	528	1
				supplier	Passivation	Silicon nitride(SiN)	12033-89-5		0.039	mg	5146	8
				supplier	passivation	Silicon oxide	7631-86-9		0.106	mg	13986	20
				supplier	polymer coating	Durimide	proprietary		0.093	mg	12271	18
Leadframe	M-004 Copper and its alloys	2350.580	mg	supplier	alloy & coating	Copper(Cu)	7440-50-8		2337.358	mg	994375	449492
				supplier	alloy & coating	Nicke(Ni)	7440-02-0		0.749	mg	319	144
				supplier	alloy & coating	Iron(Fe)	7439-89-6		2.495	mg	1061	480
				supplier	alloy & coating	Phosphorus metal	7723-14-0		9.978	mg	4245	1919
Soft solder	Solder	5.924	mg	SVHC	solder	Lead(Pb)	7439-92-1	7a-Lead in high melting temper	5.657	mg	954929	1088
				supplier	solder	Silver(Ag)	7440-22-4		0.148	mg	24983	28
				supplier	solder	Tin(Sn)	7440-31-5		0.119	mg	20088	23
Bonding wires	M-003 Aluminum and its alloys	4.156	mg	supplier	wire	Aluminium (Al)	7429-90-5		4.156	mg	1000000	799
Bonding wires 2	M-003 Aluminum and its alloys	4.002	mg	supplier	wire	Aluminium (Al)	7429-90-5		4.002	mg	1000000	770
Encapsulation	M-011 Other inorganic materials	2816.171	mg	supplier	mold compound	Quartz	14808-60-7		2252.937	mg	800000	433257
				supplier	mold compound	Epoxy Cresol Novolac	29690-82-2		281.617	mg	100000	54157
				supplier	mold compound	phenol resin	9003-35-4		140.809	mg	50000	27079
				JIG - I	mold compound	Brominated epoxy resin	68541-56-0		56.323	mg	20000	10831
				supplier	mold compound	Antimony trioxide	1309-64-4		56.323	mg	20000	10831
				supplier	mold compound	Carbon black	1333-86-4		28.162	mg	10000	5416
connections coating	Solder	11.588	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		11.588	mg	1000000	2228