



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 *	2019-05-03
Company Unique ID	NL 008751171801		
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 *	Rossana Bonaccorso	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
STW33N60DM2	TSLW*FQ67B62	A	3068	2019-05-03
Amount	UoM	Unit type	ST ECOPACK Grade	
4430.00	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	
NA	NA	NA		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
NA	Tin (Sn), matte	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
QFN	15.75-20.15-5.15	3	Through-hole	
Comment	TO 247			

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	1.03	Die - Leadframe	233
Lead	14.81	Soft solder	3344

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	14.81	Soft solder	3344
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	14.81	Soft solder	955003

Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	TSLW*FQ67862									
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	17.217	mg	supplier	die	Silicon (Si)	7440-21-3		16.522	mg	959633	3730				
				supplier	metallization	Aluminium (Al)	7429-90-5		0.334	mg	19399	75				
				supplier	Passivation	Silicon Nitride	12033-89-5		0.079	mg	4588	18				
				supplier	Passivation	Silicon Oxide	7631-86-9		0.118	mg	6855	27				
				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.008	mg	465	2				
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.115	mg	6679	26				
				supplier	back side metallization	Silver (Ag)	7440-22-4		0.041	mg	2381	9				
				supplier	alloy	Copper (Cu)	7440-50-8		2821.521	mg	998350	636912				
Leadframe	M-004 Copper and its alloys	2826.183	mg	supplier	alloy	Iron (Fe)	7439-89-6		2.825	mg	1000	638				
				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.848	mg	300	191				
				supplier	metallization	Nickel (Ni)	7440-02-0		0.915	mg	324	207				
				supplier	metallization	Phosphorus (P)	7723-14-0		0.074	mg	26	17				
				Soft solder	Solder	15.512	mg	JIG - R	solder	Lead (Pb)	7439-92-1	7a-Lead in high mel	14.814	mg	955003	3344
				supplier	solder	Silver (Ag)	7440-22-4		0.388	mg	25013	88				
supplier	solder	Tin (Sn)	7440-31-5		0.310	mg	19984	69								
Bonding wires	M-011 Other inorganic materials	0.965	mg	supplier	wire	Aluminium (Al)	7429-90-5		0.962	mg	996891	217				
				supplier	wire	Magnesium (Mg)	7439-95-4		0.003	mg	3109	1				
				Encapsulation	M-011 Other inorganic materials	1560.827	mg	supplier	mold compound	Silica, vitreous	60676-86-0		1357.919	mg	870000	306528
supplier	mold compound	Epoxy resin	25068-38-6		156.083	mg	100000	35233								
supplier	mold compound	Phenol resin	29690-82-2		39.021	mg	25000	8808								
supplier	mold compound	Carbon Black	1333-86-4		7.804	mg	5000	1762								
Connections coating	Solder	9.296	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		9.296	mg	1000000	2098				