



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 *	2018-11-06
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

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
STW7N90K5	TSLW*VK93B52	A	3068	2018-11-06
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 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	0.97	Die - Leadframe	218
Lead	6.70	Soft solder	1512

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	6.698	Soft solder	1512
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	6.698	Soft solder	955083

Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	TSLW*VK93852					
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	5.626	mg	supplier	die	Silicon (Si)	7440-21-3		5.356	mg	952009	1209
				supplier	metallization	Aluminium (Al)	7429-90-5		0.106	mg	18841	24
				supplier	Passivation	Silicon Nitride	12033-89-5		0.035	mg	6221	8
				supplier	Passivation	Silicon Oxide	7631-86-9		0.056	mg	9954	13
				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.004	mg	711	1
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.051	mg	9065	12
Leadframe	M-004 Copper and its alloys	2826.184	mg	supplier	back side metallization	Silver (Ag)	7440-22-4		0.018	mg	3199	4
				supplier	alloy	Copper (Cu)	7440-50-8		2821.522	mg	998350	636912
				supplier	alloy	Iron (Fe)	7439-89-6		2.825	mg	1000	636
				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	7.013	mg	JIG - R	solder	Lead (Pb)	7439-92-1	7a-Lead in high mel	6.698	mg	955083	1512
				supplier	solder	Silver (Ag)	7440-22-4		0.175	mg	24954	40
				supplier	solder	Tin (Sn)	7440-31-5		0.140	mg	19963	32
Bonding wires	M-003 Aluminum and its alloys	0.804	mg	supplier	wire	Aluminium (Al)	7429-90-5		0.801	mg	996269	181
				supplier	wire	Magnesium (Mg)	7439-95-4		0.003	mg	3731	1
Encapsulation	M-011 Other inorganic materials	1581.077	mg	supplier	mold compound	Silica, vitreous	60676-86-0		1375.537	mg	870000	310505
				supplier	mold compound	Epoxy resin	25068-38-6		158.108	mg	100000	35690
				supplier	mold compound	Phenol resin	29690-82-2		39.527	mg	25000	8923
				supplier	mold compound	Carbon Black	1333-86-4		7.905	mg	5000	1784
connections coating	Solder	9.296	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		9.296	mg	1000000	2098