



Materials Declaration Form

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

*: Required Field

Supplier Information			
Company Name *	STMicroelectronics	Response Date *	2018-01-29
Contact Name *	Refer to Supplier Comment section	Contact Email *	Refer to Supplier Comment section
Contact Phone *	Refer to Supplier Comment section	Authorized Representative *	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

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

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
STW28NM50N	TSLW*M256B82	A	3068	2018-01-29
	Amount	UoM	Unit type	ST ECOPACK Grade
	4430	mg	Each	ECOPACK2

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-April 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 : California Prop65 list, dated 15th December 2017			
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	1.02	Die / Leadframe	230
Lead	13.21	Soft solder	2982

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
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	TSLW*M256B82									
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	15.296	mg	supplier	die	Silicon (Si)	7440-21-3		14.678	mg	959597	3313				
				supplier	metallization	Aluminium (Al)	7429-90-5		0.297	mg	19417	67				
				supplier	Passivation	Silicon Nitride	12033-89-5		0.071	mg	4641	16				
				supplier	Passivation	Silicon Oxide	7631-86-9		0.105	mg	6865	24				
				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.007	mg	458	2				
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.102	mg	6668	23				
				supplier	back side metallization	Silver (Ag)	7440-22-4		0.036	mg	2354	8				
Leadframe	M-004 Copper and its alloys	2826.184	mg	supplier	alloy	Copper (Cu)	7440-50-8		2821.522	mg	998350	636912				
				supplier	alloy	Iron (Fe)	7439-89-6		2.825	mg	1000	637				
				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	13.835	mg	JIG - R	solder	Lead (Pb)	7439-92-1	7a-Lead in high mel	13.212	mg	954969	2982
				supplier	solder	Silver (Ag)	7440-22-4		0.346	mg	25009	78				
supplier	solder	Tin (Sn)	7440-31-5		0.277	mg	20022	63								
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	1564.424	mg	supplier	mold compound	Silica, vitreous	60676-86-0		1361.049	mg	870000	307235
supplier	mold compound	Epoxy resin	25068-38-6		156.442	mg	100000	35314								
supplier	mold compound	Phenol resin	29690-82-2		39.111	mg	25000	8829								
supplier	mold compound	Carbon Black	1333-86-4		7.822	mg	5000	1766								
Connections coating	Solder	9.296	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		9.296	mg	1000000	2098				