



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 *	2017-11-16
Contact Name *	Refer to Supplier Comment section		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
STL12N65M2	SHM4*MQF1B62	A	3068	2017-11-16
Amount	UoM	Unit type	ST ECOPACK Grade	
90.00	mg	Each	ECOPACK2	

Manufacturing information				
J-STD-020 MSL Rating	Classification Temp	Nbr of Reflow Cycles	 life.augmented	
1	260	3		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
NA	Tin (Sn), matte	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
QFN	6-5-1	12	gull wing	
Comment	PowerFLAT 5x6 HV			

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)

Query : California Prop65 list, dated 27th January 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	0.03	Die	344
Lead	4.08	Soft solder	45278

QueryList : REACH-12th January 2017				
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

Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	SHM4*MQF1862					
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)
Die	Other inorganic materials	3.426	mg	supplier	die	Silicon (Si)	7440-21-3		3.239	mg	945417	35989
				supplier	metallization	Aluminium (Al)	7429-90-5		0.090	mg	26270	1000
				supplier	Passivation	Silicon Nitride	12033-89-5		0.021	mg	6130	233
				supplier	Passivation	Silicon Oxide	7631-86-9		0.032	mg	9340	356
				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.002	mg	584	22
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.031	mg	9048	344
				supplier	back side metallization	Silver (Ag)	7440-22-4		0.011	mg	3211	122
				supplier	alloy	Copper (Cu)	7440-50-8		41.678	mg	958842	463089
				supplier	alloy	Iron (Fe)	7439-89-6		0.980	mg	22546	10889
				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.059	mg	1357	656
Leadframe	Copper & its alloys	43.467	mg	supplier	alloy	Zinc (Zn)	7440-66-6		0.051	mg	1174	567
				supplier	metallization	Silver (Ag)	7440-22-4		0.699	mg	16081	7767
				supplier	solder	Lead (Pb)	7439-92-1	7a-Lead in high me	4.075	mg	955004	45278
				supplier	solder	Silver (Ag)	7440-22-4		0.107	mg	25076	1189
				supplier	solder	Tin (Sn)	7440-31-5		0.085	mg	19920	944
Soft solder	Solder	4.267	mg	JIG - R	solder	Copper (Cu)	7440-50-8		0.181	mg	1000000	2011
				supplier	wire	Silica, vitreous	60676-86-0		35.651	mg	926000	396122
Bonding wires	Other inorganic materials	0.181	mg	supplier	silica	Silica, vitreous	60676-86-0		35.651	mg	926000	396122
				supplier	epoxy resin	epoxy resin	85954-11-6		1.540	mg	40000	17111
				supplier	phenol resin	phenol resin	26834-02-6		1.155	mg	30000	12833
				supplier	carbon black	carbon black	1333-86-4		0.154	mg	4000	1711
Encapsulation	Other Organic Materials	38.500	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		0.159	mg	1000000	1767
				supplier	mold compound	phenol resin	26834-02-6		1.155	mg	30000	12833
Connections coating	Solder	0.159	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		0.159	mg	1000000	1767
				supplier	mold compound	carbon black	1333-86-4		0.154	mg	4000	1711