



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 *	2019-03-14
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
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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
STL15N60DM6	SHM4*PQ63B62	A	3068	2019-03-14
Amount	UoM	Unit type	ST ECOPACK Grade	
90.00	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	
1	260	3		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy		
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-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	0.32	Die	3511
Lead	5.85	Soft solder	64956

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	5.85	Soft solder	64956
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	5.85	Soft solder	955073

Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	SHM4*PQ63862									
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	5.285	mg	supplier	die	Silicon (Si)	7440-21-3		4.730	mg	894986	52556				
				supplier	metallization	Aluminium (Al)	7429-90-5		0.123	mg	23273	1367				
				supplier	metallization	Copper (Cu)	7440-50-8		0.046	mg	8704	511				
				supplier	metallization	Nickel (Ni)	7440-02-0		0.271	mg	51277	3011				
				supplier	metallization	Silver (Ag)	7440-22-4		0.016	mg	3027	178				
				supplier	metallization	Titanium (Ti)	7440-32-6		0.005	mg	947	56				
				supplier	Passivation	Silicon Nitride	12033-89-5		0.028	mg	5298	311				
				supplier	Passivation	Silicon Oxide	7631-86-9		0.002	mg	378	22				
				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.003	mg	568	33				
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.045	mg	8515	500				
				supplier	back side metallization	Silver (Ag)	7440-22-4		0.016	mg	3027	178				
				Leadframe	M-004 Copper and its alloys	43.468	mg	supplier	alloy	Copper (Cu)	7440-50-8		42.713	mg	982631	474589
								supplier	alloy	Iron (Fe)	7439-89-6		0.043	mg	989	478
supplier	alloy	Iron Phosphide (FeP)	26508-33-8						0.013	mg	299	144				
supplier	metallization	Silver (Ag)	7440-22-4						0.699	mg	16081	7767				
supplier	alloy	Lead (Pb)	7439-92-1					7a-Lead in high mel	5.846	mg	955073	64956				
Soft solder	Solder	6.121	mg	JIG - R	solder	Silver (Ag)	7440-22-4		0.153	mg	24996	1700				
				supplier	solder	Tin (Sn)	7440-31-5		0.122	mg	19931	1356				
				supplier	wire	Copper (Cu)	7440-50-8		0.226	mg	1000000	2511				
Encapsulation	M-011 Other inorganic materials	34.741	mg	supplier	mold compound	Silica, vitreous	60676-86-0		32.170	mg	925995	357444				
				supplier	mold compound	epoxy resin	85954-11-6		1.390	mg	40010	15444				
				supplier	mold compound	phenol resin	26834-02-6		1.042	mg	29993	11578				
				supplier	mold compound	carbon black	1333-86-4		0.139	mg	4002	1543				
Connections coating	Solder	0.159	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		0.159	mg	1000000	1767				