



## Materials Declaration Form

<b>IPC Form Type *</b>	1752 Distribute	<b>Version</b>	2
<b>Sectionals *</b>	Material Info Manufacturing Info	<b>Subsectionals *</b>	A-D  * : Required Field

Supplier Information			
<b>Company Name *</b>	STMicroelectronics	<b>Response Date *</b>	2018-10-15
<b>Company Unique ID</b>	NL 008751171801		
<b>Contact Name *</b>	Refer to Supplier Comment section		Refer to Supplier Comment section
<b>Contact Phone *</b>	Refer to Supplier Comment section	<b>Contact Email *</b>	Refer to Supplier Comment section
<b>Authorized Representative *</b>	Rossana Bonaccorso	<b>Representative Title</b>	ADG MD Champion
<b>Representative Phone *</b>	Refer to Supplier Comment section	<b>Representative Email *</b>	Refer to Supplier Comment section
<b>Supplier Comment</b>	Online Technical Support - STMicroelectronics : <a href="http://www.st.com/web/en/support/support.html">http://www.st.com/web/en/support/support.html</a>		

**Uncertainty Statement**

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Legal Statement		
<b>Supplier Acceptance *</b>	true	<b>Legal Declaration *</b>
		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
STF24N60M6	TSFP*BQ65B62	A	3068	2018-10-15
	Amount	UoM	Unit type	ST ECOPACK Grade
	1900.00	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	
SIP	10.2-16.15-4.5	3	Through-hole	
Comment	TO 220 ISO FULL PACK IN LINE			

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	1.17	Die - Leadframe	615
Lead	9.14	Soft solder	4812

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	9.14	Soft solder	4812
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	9.14	Soft solder	954982

Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	TSFP*BQ65862									
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	8.275	mg	supplier	die	Silicon (Si)	7440-21-3		7.405	mg	894864	3897				
				supplier	metallization	Aluminium (Al)	7429-90-5		0.193	mg	23323	102				
				supplier	metallization	Copper (Cu)	7440-50-8		0.071	mg	8580	37				
				supplier	metallization	Nickel (Ni)	7440-02-0		0.424	mg	51239	223				
				supplier	metallization	Silver (Ag)	7440-22-4		0.025	mg	3022	13				
				supplier	metallization	Titanium (Ti)	7440-32-6		0.007	mg	846	4				
				supplier	Passivation	Silicon Nitride	12033-89-5		0.045	mg	5438	24				
				supplier	Passivation	Silicon Oxide	7631-86-9		0.004	mg	483	2				
				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.005	mg	604	3				
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.071	mg	8580	37				
				supplier	back side metallization	Silver (Ag)	7440-22-4		0.025	mg	3021	13				
				Leadframe	M-004 Copper and its alloys	605.984	mg	supplier	alloy	Copper (Cu)	7440-50-8		604.468	mg	997498	318141
								supplier	alloy	Iron (Fe)	7439-89-6		0.605	mg	998	318
supplier	alloy	Iron Phosphide (FeP)	26508-33-8						0.182	mg	300	96				
supplier	metallization	Nickel (Ni)	7440-02-0						0.674	mg	1112	355				
supplier	metallization	Phosphorus (P)	7723-14-0						0.055	mg	92	29				
Soft solder	Solder	9.574	mg	JIG - R	solder	Lead (Pb)	7439-92-1	7a-Lead in high me	9.143	mg	954982	4812				
				supplier	solder	Silver (Ag)	7440-22-4		0.239	mg	24963	126				
				supplier	solder	Tin (Sn)	7440-31-5		0.192	mg	20055	101				
Bonding wires	M-011 Other inorganic materials	0.932	mg	supplier	wire	Aluminium (Al)	7429-90-5		0.928	mg	995708	488				
				supplier	wire	Magnesium (Mg)	7439-95-4		0.004	mg	4292	2				
				supplier	mold compound	Quartz	14808-60-7		888.557	mg	699999	467662				
Encapsulation	M-011 Other inorganic materials	1269.369	mg	supplier	mold compound	Silica, vitreous	60676-86-0		95.203	mg	75000	50107				
				supplier	mold compound	Epoxy resin	25068-38-6		177.712	mg	140000	93533				
				supplier	mold compound	phenol resin	29690-82-2		88.856	mg	70000	46766				
				supplier	mold compound	metal hydroxide	Proprietary		12.694	mg	10000	6681				
				supplier	mold compound	carbon black	1333-86-4		6.347	mg	5001	3341				
Connections coating	Solder	5.866	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		5.866	mg	1000000	3087				