



## 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
STP45N60DM6	XLDZ*PQ6KB62	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		
NA	Tin (Sn), matte	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape
SIP	10-9.1-4.5	3	THROUGH HOLE
Comment	TO 220 AB NON ISOL		

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	1.40	Die - Leadframe	736
Lead	16.48	Soft solder	8676

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	16.48	Soft solder	8676
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	16.48	Soft solder	954985

Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	XLDZ*PQ6KB62									
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	15.196	mg	supplier	die	Silicon (Si)	7440-21-3		13.598	mg	894841	7157				
				supplier	metallization	Aluminium (Al)	7429-90-5		0.355	mg	23361	187				
				supplier	metallization	Copper (Cu)	7440-50-8		0.131	mg	8621	69				
				supplier	metallization	Nickel (Ni)	7440-02-0		0.779	mg	51263	410				
				supplier	metallization	Silver (Ag)	7440-22-4		0.046	mg	3028	24				
				supplier	metallization	Titanium (Ti)	7440-32-6		0.013	mg	855	7				
				supplier	Passivation	Silicon Nitride	12033-89-5		0.082	mg	5396	43				
				supplier	Passivation	Silicon Oxide	7631-86-9		0.007	mg	461	4				
				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.009	mg	592	5				
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.130	mg	8555	68				
				supplier	back side metallization	Silver (Ag)	7440-22-4		0.046	mg	3027	24				
				Leadframe	M-004 Copper and its alloys	1253.535	mg	supplier	alloy	Copper (Cu)	7440-50-8		1251.376	mg	998278	658619
								supplier	alloy	Iron (Fe)	7439-89-6		1.253	mg	1000	659
								supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.376	mg	300	198
supplier	metallization	Nickel (Ni)	7440-02-0						0.490	mg	390	258				
supplier	metallization	Phosphorus (P)	7723-14-0						0.040	mg	32	21				
Soft solder	Solder	17.261	mg	JIG - R	solder	Lead (Pb)	7439-92-1	7a-Lead in high mel	16.484	mg	954985	8676				
				supplier	solder	Silver (Ag)	7440-22-4		0.432	mg	25028	227				
				supplier	solder	Tin (Sn)	7440-31-5		0.345	mg	19987	182				
Bonding wires	M-011 Other inorganic materials	0.882	mg	supplier	wire	Aluminium (Al)	7429-90-5		0.879	mg	996599	463				
				supplier	wire	Magnesium (Mg)	7439-95-4		0.003	mg	3401	2				
				supplier	mold compound	Silica, vitreous	60676-86-0		527.885	mg	870001	277834				
Encapsulation	M-011 Other inorganic materials	606.764	mg	supplier	mold compound	Epoxy resin	25068-38-6		60.676	mg	99999	31935				
				supplier	mold compound	Phenol resin	29690-82-2		15.169	mg	25000	7984				
				supplier	mold compound	Carbon Black	1333-86-4		3.034	mg	5000	1596				
				supplier	solder alloy	Tin (Sn)	7440-31-5		6.362	mg	1000000	3348				