



## 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

<b>Supplier Information</b>			
<b>Company Name *</b>	STMicroelectronics	<b>Response Date *</b>	2019-06-03
<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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<b>Legal Statement</b>			
<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
VNN7NV04PTR-E	STLL*VNS2AAC	A	Z8GA	2019-06-03
	Amount	UoM	Unit type	ST ECOPACK Grade
	110	mg	Each	ECOPACK® 2
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
3	210	3		
Bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
Not Applicable	Tin (Sn), matte	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
SOT	0.264,0.248,0.75	2	gull wing	
Comment	Package: SOT 223			

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 8th March 2019			
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	2.36	Die - Leadframe	21418
Lead	1.94	Soft solder	17655

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	1.94	Soft solder	17655
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	1.94	Soft solder	954769

Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	STLL*VNS2AAC					
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	3.675	mg	supplier	die	Silicon (Si)	7440-21-3		3.530	mg	960544	32091
				supplier	metallization	Aluminium (Al)	7429-90-5		0.022	mg	5986	200
				supplier	Passivation	Silicon Nitride	12033-89-5		0.025	mg	6803	227
				supplier	Passivation	Silicon Oxide	7631-86-9		0.024	mg	6531	218
				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.002	mg	544	18
				supplier	back side metallization	Gold (Au)	7440-57-5		0.005	mg	1361	45
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.024	mg	6531	218
				supplier	polymer die coating	PIXI Gamma-butyrolactone	96-48-0		0.043	mg	11700	393
Leadframe	Copper and its alloy	58.286	mg	Supplier	alloy	Copper(CU)	7440-50-8		55.873	mg	958601	507936
				Supplier	alloy	Iron(Fe)	7439-89-6		0.058	mg	995	527
				Supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.023	mg	394	209
				Supplier	alloy	Nickel (Ni)	7440-02-0		2.332	mg	40010	21200
Die Attach	Other Organic Material	2.034	mg	Supplier	sold solder	Silver(Ag)	7440-22-4		0.051	mg	25074	464
				Supplier	sold solder	Tin(Sn)	7440-31-5		0.041	mg	20157	373
				Supplier	sold solder	Lead (Pb)	7439-92-1	7a-Lead in high me	1.942	mg	954769	17655
Bonding wire	Other Inorganic Material	0.601	mg	Supplier	wire	Gold(Au)	7440-57-5		0.601	mg	1000000	5464
Encapsulation	Other Organic Material	43.440	mg	Supplier	mold compound	Epoxy Resin	25068-38-6		2.172	mg	50000	19745
				Supplier	mold compound	Epoxy Resin B	29690-82-2		2.172	mg	50000	19745
				Supplier	mold compound	Phenol Resin	29690-82-2		0.434	mg	9991	3945
				Supplier	mold compound	Silica(Amorphous) A	60676-86-0		36.056	mg	830018	327782
				Supplier	mold compound	Silica(Amorphous) B	7631-86-9		2.172	mg	50000	19745
				Supplier	mold compound	Carbon Black	1333-86-4		0.434	mg	9991	3945
				Supplier	solder alloy	Tin(Sn)	7440-31-5		1.964	mg	1000000	17855
Connection coating	Other Inorganic Material	1.964	mg	Supplier	solder alloy	Tin(Sn)	7440-31-5		1.964	mg	1000000	17855