



## Materials Declaration Form

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

Supplier Information			
<b>Company Name *</b>	STMicroelectronics	<b>Response Date *</b>	2018-04-06
<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>	Giovanni Giacobello	<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
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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
VN5R003HTR-E	AS95*VH31AAW	A	3068	2018-04-06
Amount	UoM	Unit type	ST ECOPACK Grade	
290	mg	Each	ECOPACK® 1	
	Comment	ECOPACK® or ECOPACK® 1 is STMicroelectronics trade name for ROHS compliant devices		

Manufacturing information				
J-STD-020 MSL Rating	Classification Temp	Nbr of Reflow Cycles		 life.augmented
3	260	3		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
Not Applicable	Tin (Sn), matte	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
CHP	2.3x6.5x6.1	6	flat	
Comment	Package: TO-252 6 LEADS SMD (HPAK)			

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)

QueryList : California Prop65 list, dated 15th December 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	0.19	Die - Leadframe	659
Lead	7.20	Soft solder - Solder paste	24817

QueryList : REACH-15th January 2018				
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	A595*VH31AAW					
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	9.040	mg	supplier	die	Silicon (Si)	7440-21-3		8.470	mg	936947	29207
				supplier	metallization	Aluminium (Al)	7429-90-5		0.053	mg	5865	183
				supplier	metallization	Copper (Cu)	7440-50-8		0.071	mg	7854	245
				supplier	metallization	Titanium (Ti)	7440-32-6		0.225	mg	24889	776
				supplier	Passivation	Silicon Nitride	12033-89-5		0.041	mg	4535	141
				supplier	Passivation	Silicon Oxide	7631-86-9		0.110	mg	12168	379
				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.004	mg	442	14
				supplier	back side metallization	Gold (Au)	7440-57-5		0.012	mg	1327	41
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.054	mg	5973	186
				supplier	alloy	Copper (Cu)	7440-50-8		198.070	mg	997497	683000
Leadframe	M-004 Copper and its alloys	198.567	mg	supplier	alloy	Iron (Fe)	7439-89-6		0.091	mg	458	314
				supplier	metallization	Nickel (Ni)	7440-02-0		0.137	mg	690	472
				supplier	metallization	Silver (Ag)	7440-22-4		0.269	mg	1355	928
				supplier	glue	epoxy resin	25068-38-6		0.054	mg	627907	186
Die attach		0.086	mg	supplier	glue	Polypropylene	9003-07-0		0.002	mg	23256	7
				supplier	glue	epoxy resin	29690-82-2		0.009	mg	104651	31
				supplier	glue	propenoate polymer	538311-13-6		0.017	mg	197674	59
				supplier	glue	Diphenol Propane Diglycidyl Ether	1675-54-3		0.004	mg	46512	14
Soft solder	Solder	7.536	mg	JIG - R	solder	Lead (Pb)	7439-92-1	7a-Lead in high me	7.197	mg	955016	24817
				supplier	solder	Silver (Ag)	7440-22-4		0.188	mg	24947	648
				supplier	solder	Tin (Sn)	7440-31-5		0.151	mg	20037	521
Bonding wires	M-004 Copper and its alloys	1.220	mg	supplier	wire	Gold (Au)	7440-57-5		0.322	mg	263934	1110
				supplier	wire	Aluminium (Al)	7429-90-5		0.898	mg	736066	3097
				supplier	mold compound	Silica, vitreous	60676-86-0		58.333	mg	822994	201148
Encapsulation	M-011 Other inorganic materials	70.879	mg	supplier	mold compound	Epoxy Cresol Novolak	29690-82-2		4.962	mg	70007	17110
				supplier	mold compound	Phenol resin	9003-35-4		2.835	mg	39998	9776
				supplier	mold compound	Biphenyl epoxy resin	85954-11-6		2.126	mg	29995	7331
				supplier	mold compound	Antimony Trioxide	1309-64-4		0.851	mg	12006	2934
				supplier	mold compound	Brominated Epoxy Resin	40039-93-8		1.418	mg	20006	4890
				supplier	mold compound	Carbon black	1333-86-4		0.354	mg	4994	1221
				supplier	solder alloy	Tin (Sn)	7440-31-5		2.672	mg	1000000	9214
connections coating	Solder	2.672	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		2.672	mg	1000000	9214