



## Materials Declaration Form

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

*\* : Required Field*

Supplier Information			
<b>Company Name *</b>	<b>STMicroelectronics</b>	<b>Response Date *</b>	<b>2020-04-06</b>
<b>Company Unique ID</b>	<b>NL 008751171B01</b>		
<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>	<b>Giovanni Giacobello</b>	<b>Representative Title</b>	<b>ADG MD CHAMPION</b>
<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>	<b>true</b>	<b>Legal Declaration *</b>	<b>Standard</b>
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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
VNH5019ATR-E	ANLD*VH09CAU	A	959	2020-04-06
	Amount	UoM	Unit type	ST ECOPACK Grade
	2006	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		
3	260	3		
Bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
Not Applicable	Tin (Sn), matte, annealed	Copper Alloy	CD00368185	



Package Designator	Size	Nbr of instances	Shape	
QFP	17.20,16.00,2.35	30	gull wing	
Comment	Multi PowerSO 30			

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 3rd January 2020			
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	0.20	die - Leadframe	101
Lead	11.88	soft solder	5921

QueryList : REACH-16th January 2020				
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	11.88	Soft solder	5921
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	11.875	Soft solder	974959

Material Composition Declaration :						Mfr Item Name	ANLD*VH09CAU					
note : Substance present with less 0.001mg will not be declared in this document												
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)
Dies	M-011 Other inorganic materials	23.819	mg	supplier	die	Silicon(Si)	7440-21-3		22.329	mg	937445	11134
				supplier	metallisation	Aluminium(Al)	7429-90-5		0.137	mg	5752	68
				supplier	metallisation	Copper(Cu)	7440-50-8		0.184	mg	7725	92
				supplier	metallisation	Gold(Au)	7440-57-5		0.033	mg	1385	16
				supplier	metallisation	Nickel(Ni)	7440-02-0		0.152	mg	6382	76
				supplier	metallisation	Titanium(Ti)	7440-32-6		0.593	mg	24896	296
				supplier	Passivation	Silicon nitride(SiN)	12033-89-5		0.105	mg	4408	52
				supplier	passivation	Silicon oxide	7631-86-9		0.286	mg	12007	143
Leadframe	M-004 Copper and its alloys	525.026	mg	supplier	alloy & coating	Copper(Cu)	7440-50-8		511.318	mg	973891	254958
				supplier	alloy & coating	Nickel(Ni)	7440-02-0		0.050	mg	95	25
				supplier	alloy & coating	Iron(Fe)	7439-89-6		12.026	mg	22906	5997
				supplier	alloy & coating	Iron Phosphide(FeP)	26508-33-8		0.724	mg	1379	361
				supplier	alloy & coating	Phosphorus metal	7723-14-0		0.050	mg	95	25
				supplier	alloy & coating	Zinc(Zn)	7440-66-6		0.630	mg	1200	314
				supplier	alloy & coating	Silver (Ag)	7440-22-4		0.228	mg	434	114
				supplier	alloy & coating	Lead(Pb)	7439-92-1	7a-Lead in high melting temper	11.875	mg	974959	5921
Soft solder	Solder	12.180	mg	SVHC	solder	Lead(Pb)	7439-92-1	7a-Lead in high melting temper	11.875	mg	974959	5921
				supplier	solder	Silver(Ag)	7440-22-4		0.183	mg	15025	91
				supplier	solder	Tin(Sn)	7440-31-5		0.122	mg	10016	61
Bonding wires	M-003 Aluminum and its alloys	6.567	mg	supplier	wire	Aluminium (Al)	7429-90-5		6.567	mg	1000000	3274
Bonding wires 2	M-008 Precious metals	0.606	mg	supplier	wire	Gold(Au)	7440-57-5		0.606	mg	1000000	302
Encapsulation	M-011 Other inorganic materials	1433.686	mg	supplier	mold compound	Silica vitreous	60676-86-0		1224.368	mg	854000	610505
				supplier	mold compound	Epoxy Cresol Novolac	29690-82-2		43.011	mg	30000	21447
				supplier	mold compound	Biphenyl epoxy resin	85954-11-6		93.190	mg	65000	46467
				supplier	mold compound	Phenol Resin	26834-02-6		57.347	mg	40000	28595
				supplier	mold compound	Bismuth compound	7440-69-9		8.602	mg	6000	4289
				supplier	mold compound	Carbon black	1333-86-4		7.168	mg	5000	3574
connections coating	Solder	3.616	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		3.616	mg	1000000	1803