



Materials Declaration Form

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

** : Required Field*

Supplier Information			
Company Name *	STMicroelectronics	Response Date *	2020-11-05
Company Unique ID	NL 008751171B01		
Contact Name *	Refer to Supplier Comment section		Refer to Supplier Comment section
Contact Phone *	Refer to Supplier Comment section	Contact Email *	Refer to Supplier Comment section
Authorized Representative *	giovanni giacopello	Representative Title	ADG MD CHAMPION
Representative Phone *	Refer to Supplier Comment section	Representative Email *	Refer to Supplier Comment section
Supplier Comment	Online Technical Support - STMicroelectronics : http://www.st.com/web/en/support/support.html		

Uncertainty Statement

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Legal Statement

Supplier Acceptance *	true	Legal Declaration *	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
VN5050JTR-E	ARWL*VNJ4AFC	A	64BA	2020-11-05
	Amount	UoM	Unit type	ST ECOPACK Grade
	84	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, annealed	Copper Alloy	CD00311409	

Package Designator	Size	Nbr of instances	Shape	
QFP	4.90,3.90,1.55	12	gull wing	
Comment	PowerSSO 12 monoframe. MDF valid for CPs: VN5050J-E, VN5050JTR-E			

QueryList : RoHS Directive 2011/65/EU-July 2011 Annex II amended by Delegated 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 2020/363_ March 2020	
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	0.02	die	226
Lead	1.61	soft solder	19155
Antimony trioxide	0.58	encapsulation	6905

QueryList : REACH-25th June 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	1.61	Soft solder	19155
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	1.609	Soft solder	954896

Responsible metals sourcing	
Query	Response
The component is containing at least one of the following metals : Cobalt , Gold , Tantalum , Tin , Tungsten.	true
The following metals are present is the component :	Gold, Tin,
This product is in the scope of the responsible metals sourcing, its compliance is covered by our company processes .	

Material Composition Declaration :						Mfr Item Name	ARWL*VNI4AFC					
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)
Die	M-011 Other inorganic materials	3.017	mg	supplier	die	Silicon(Si)	7440-21-3		2.797	mg	927080	33296
				supplier	metallisation	Aluminium(Al)	7429-90-5		0.017	mg	5635	202
				supplier	metallisation	Copper(Cu)	7440-50-8		0.023	mg	7623	274
				supplier	metallisation	Gold(Au)	7440-57-5		0.004	mg	1326	48
				supplier	metallisation	Nicke(Ni)	7440-02-0		0.019	mg	6298	226
				supplier	metallisation	Titanium(Ti)	7440-32-6		0.074	mg	24528	881
				supplier	Passivation	Silicon nitride(SiN)	12033-89-5		0.013	mg	4309	155
				supplier	passivation	Silicon oxide	7631-86-9		0.036	mg	11932	429
				supplier	polymer coating	Polyimide	Proprietary		0.034	mg	11269	405
				supplier	alloy & coating	Copper(Cu)	7440-50-8		29.188	mg	971088	347476
Leadframe	M-004 Copper and its alloys	30.057	mg	supplier	alloy & coating	Iron(Fe)	7439-89-6		0.687	mg	22857	8179
				supplier	alloy & coating	Iron Phosphide(FeP)	26508-33-8		0.041	mg	1364	488
				supplier	alloy & coating	Zinc(Zn)	7440-66-6		0.036	mg	1198	429
				supplier	alloy & coating	Silver (Ag)	7440-22-4		0.105	mg	3493	1250
Soft solder	Solder	1.685	mg	SVHC	solder	Lead(Pb)	7439-92-1	7a-Lead in high melting temper	1.609	mg	954896	19155
				supplier	solder	Tin(Sn)	7440-31-5		0.034	mg	20178	405
				supplier	solder	Silver(Ag)	7440-22-4		0.042	mg	24926	500
Bonding wires	M-008 Precious metals	0.104	mg	supplier	wire	Gold(Au)	7440-57-5		0.104	mg	1000000	1238
				supplier	wire	Copper(Cu)	7440-50-8		0.170	mg	1000000	2024
Bonding wires 2	M-004 Copper and its alloys	0.170	mg	supplier	wire	Copper(Cu)	7440-50-8		0.170	mg	1000000	2024
Encapsulation	M-011 Other inorganic materials	47.972	mg	supplier	mold compound	Silica vitreous	60676-86-0		39.481	mg	823000	470012
				supplier	mold compound	Epoxy Cresol Novolac	29690-82-2		3.358	mg	69999	39976
				supplier	mold compound	Phenol resin	9003-35-4		1.919	mg	40003	22845
				supplier	mold compound	Biphenyl epoxy resin	85954-11-6		1.439	mg	29997	17131
				supplier	mold compound	Antimony trioxide	1309-64-4		0.576	mg	12007	6857
				supplier	mold compound	Brominated epoxy resin	40039-93-8		0.959	mg	19991	11417
				supplier	mold compound	Carbon black	1333-86-4		0.240	mg	5003	2857
connections coating	Solder	0.995	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		0.995	mg	1000000	11845