



Materials Declaration Form

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

** : Required Field*

Supplier Information			
Company Name *	STMicroelectronics	Response Date *	2020-04-14
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
VN5E006ASPTR-E	S2IY*VH22ACZ	A	959	2020-04-14
	Amount	UoM	Unit type	ST ECOPACK Grade
	1140	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	225	3		
Bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
Not Applicable	Tin (Sn), matte, annealed	Copper Alloy	DM00519004	

Package Designator	Size	Nbr of instances	Shape	
QFP	8.62,6.58,3.50	10	gull wing	
Comment	PowerSO-10			

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	0.19	die - leadframe	168
Lead	5.40	soft solder	4733

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	5.40	Soft solder	4733
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	5.396	Soft solder	975063

Material Composition Declaration :						Mfr Item Name	S21Y*VH22ACZ					
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	10.467	mg	supplier	die	Silicon(Si)	7440-21-3		9.799	mg	936180	8596
				supplier	metallisation	Aluminium(Al)	7429-90-5		0.063	mg	6019	55
				supplier	metallisation	Copper(Cu)	7440-50-8		0.085	mg	8122	75
				supplier	metallisation	Gold(Au)	7440-57-5		0.012	mg	1146	11
				supplier	metallisation	Nickel(Ni)	7440-02-0		0.055	mg	5255	48
				supplier	metallisation	Titanium(Ti)	7440-32-6		0.272	mg	25986	238
				supplier	Passivation	Silicon nitride(SiN)	12033-89-5		0.049	mg	4681	43
				supplier	passivation	Silicon oxide	7631-86-9		0.132	mg	12611	116
Leadframe	M-004 Copper and its alloys	739.434	mg	supplier	alloy & coating	Copper(Cu)	7440-50-8		738.095	mg	998189	647452
				supplier	alloy & coating	Nickel(Ni)	7440-02-0		0.136	mg	184	119
				supplier	alloy & coating	Iron(Fe)	7439-89-6		0.340	mg	460	298
				supplier	alloy & coating	Iron Phosphide(FeP)	26508-33-8		0.621	mg	840	545
				supplier	alloy & coating	Phosphorus metal	7723-14-0		0.014	mg	19	12
				supplier	alloy & coating	Silver (Ag)	7440-22-4		0.228	mg	308	200
				supplier	solder	Lead(Pb)	7439-92-1	7a-Lead in high melting temper	5.396	mg	975063	4733
Soft solder	Solder	5.534	mg	supplier	solder	Silver(Ag)	7440-22-4		0.083	mg	14998	73
				supplier	solder	Tin(Sn)	7440-31-5		0.055	mg	9939	48
				supplier	wire	Aluminium (Al)	7429-90-5		4.884	mg	1000000	4284
Bonding wires	M-003 Aluminum and its alloys	4.884	mg	supplier	wire	Aluminium (Al)	7429-90-5		4.884	mg	1000000	4284
Bonding wires 2	M-008 Precious metals	0.525	mg	supplier	wire	Gold(Au)	7440-57-5		0.525	mg	1000000	461
Encapsulation	M-011 Other inorganic materials	377.074	mg	supplier	mold compound	Silica vitreous	60676-86-0		325.792	mg	864000	285782
				supplier	mold compound	Epoxy type resin	proprietary		28.281	mg	75001	24808
				supplier	mold compound	Phenol type resin	proprietary		18.854	mg	50001	16539
				supplier	mold compound	Mercaptopropyl trimethoxysilane	4420-74-0		1.885	mg	5000	1654
				supplier	mold compound	Quartz	14808-60-7		1.131	mg	2999	992
				supplier	mold compound	Carbon black	1333-86-4		1.131	mg	2999	992
connections coating	Solder	2.082	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		2.082	mg	1000000	1826