



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 *	2020-06-05
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
VND5T016ASPTR-E	SMFG*VH33CBX	A	959	2020-06-05
	Amount	UoM	Unit type	ST ECOPACK Grade
	1131	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	225	3		
Bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
Not Applicable	Tin (Sn), matte, annealed	Copper Alloy	DM00519010	



Package Designator	Size	Nbr of instances	Shape	
Not Applicable	8.62,6.58,3.50	16	shape	
Comment	PowerSO 16. MDF valid for CPs: VND5T016ASP-E,VND5T016ASPTR-E			

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	0.85	die - leadframe	749
Lead	7.06	soft solder	6249

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	7.06	Soft solder	6249
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	7.064	Soft solder	974883

Material Composition Declaration :						Mfr Item Name	SMFG*VH33CBX					
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	18.093	mg	supplier	die	Silicon(Si)	7440-21-3		16.741	mg	925276	14807
				supplier	metallisation	Aluminium(Al)	7429-90-5		0.107	mg	5914	95
				supplier	metallisation	Copper(Cu)	7440-50-8		0.144	mg	7959	127
				supplier	metallisation	Gold(Au)	7440-57-5		0.020	mg	1105	18
				supplier	metallisation	Nickel(Ni)	7440-02-0		0.095	mg	5251	84
				supplier	metallisation	Titanium(Ti)	7440-32-6		0.464	mg	25645	410
				supplier	Passivation	Silicon nitride(SiN)	12033-89-5		0.083	mg	4587	73
				supplier	passivation	Silicon oxide	7631-86-9		0.224	mg	12380	198
				supplier	polymer coating	Polyimide	Proprietary		0.215	mg	11883	190
Leadframe	M-004 Copper and its alloys	779.214	mg	supplier	alloy & coating	Copper(Cu)	7440-50-8		777.444	mg	997729	687699
				supplier	alloy & coating	Nickel(Ni)	7440-02-0		0.752	mg	965	665
				supplier	alloy & coating	Iron(Fe)	7439-89-6		0.358	mg	459	317
				supplier	alloy & coating	Iron Phosphide(FeP)	26508-33-8		0.654	mg	839	579
				supplier	alloy & coating	Phosphorus metal	7723-14-0		0.006	mg	8	5
Die attach		0.221	mg	supplier	glue or tape (choose)	Epoxy resin	25068-38-6		0.140	mg	633483	124
				supplier	glue or tape	Polypropylene	9003-07-0		0.004	mg	18100	4
				supplier	glue or tape	epoxy resin	29690-82-2		0.022	mg	99548	19
				supplier	glue or tape	Propenoate polymer	538311-13-6		0.044	mg	199095	39
				supplier	glue or tape	Bisphenol A diglycidyl ether	1675-54-3		0.011	mg	49774	10
Soft solder	Solder	7.246	mg	SVHC	solder	Lead(Pb)	7439-92-1	7a-Lead in high melting temper	7.064	mg	974882	6249
				supplier	solder	Silver(Ag)	7440-22-4		0.109	mg	15043	96
				supplier	solder	Tin(Sn)	7440-31-5		0.073	mg	10075	65
Bonding wires	M-003 Aluminum and its alloys	6.293	mg	supplier	wire	Aluminium (Al)	7429-90-5		6.293	mg	1000000	5567
Bonding wires 2	M-008 Precious metals	0.195	mg	supplier	wire	Gold(Au)	7440-57-5		0.195	mg	1000000	172
Encapsulation	M-011 Other inorganic materials	318.484	mg	supplier	mold compound	Silica vitreous	60676-86-0		275.170	mg	863999	243406
				supplier	mold compound	Epoxy type resin	proprietary		23.886	mg	74999	21129
				supplier	mold compound	Phenol type resin	proprietary		15.924	mg	49999	14086
				supplier	mold compound	Mercaptopropyl trimethoxysilane	4420-74-0		1.592	mg	4999	1408
				supplier	mold compound	Quartz	14808-60-7		0.956	mg	3002	846
				supplier	mold compound	Carbon black	1333-86-4		0.956	mg	3002	846
connections coating	Solder	0.754	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		0.754	mg	1000000	667