



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 *	2020-05-06
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
VND5E008AYTR-E	ARVC*VH17ABX	A	959	2020-05-06
	Amount	UoM	Unit type	ST ECOPACK Grade
	488	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	CD00271445	



Package Designator	Size	Nbr of instances	Shape	
QFP	10.30,7.50,2.28	36	gull wing	
Comment	PwSSO36 DUAL CHIP. MDF valid for CPs: VND5E008AY-E,VND5E008AYTR-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	0.07	die	152
Lead	1.63	soft solder	3332

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	1.63	Soft solder	3332
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	1.626	Soft solder	974820

Material Composition Declaration :						Mfr Item Name	ARVC*VH17ABX					
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	14.912	mg	supplier	die	Silicon(Si)	7440-21-3		14.006	mg	939244	28701
				supplier	metallisation	Aluminium(Al)	7429-90-5		0.086	mg	5767	176
				supplier	metallisation	Copper(Cu)	7440-50-8		0.115	mg	7712	234
				supplier	metallisation	Gold(Au)	7440-57-5		0.016	mg	1073	33
				supplier	metallisation	Nickel(Ni)	7440-02-0		0.074	mg	4962	152
				supplier	metallisation	Titanium(Ti)	7440-32-6		0.370	mg	24812	758
				supplier	Passivation	Silicon nitride(SiN)	12033-89-5		0.066	mg	4426	135
Leadframe	M-004 Copper and its alloys	159.665	mg	supplier	passivation	Silicon oxide	7631-86-9		0.179	mg	12004	367
				supplier	alloy & coating	Copper(Cu)	7440-50-8		155.390	mg	973225	318422
				supplier	alloy & coating	Iron(Fe)	7439-89-6		3.655	mg	22892	7490
				supplier	alloy & coating	Iron Phosphide(FeP)	26508-33-8		0.220	mg	1378	451
				supplier	alloy & coating	Zinc(Zn)	7440-66-6		0.191	mg	1196	391
				supplier	alloy & coating	Silver (Ag)	7440-22-4		0.209	mg	1309	428
				supplier	glue	Epoxy type resin	proprietary		0.328	mg	467903	672
Die attach	M-011 Other inorganic materials	0.701	mg	supplier	glue	Tetrafluoroethylene	9002-84-0		0.228	mg	325250	467
				supplier	glue	Polybutadiene polymer	25655-35-0		0.084	mg	119829	172
				supplier	glue	Silane	7803-62-5		0.021	mg	29957	43
				supplier	glue	Maleic anhydride	108-31-6		0.007	mg	9985	14
				supplier	glue	Epoxypropoxy-propyl-trimethoxysilane	2530-83-8		0.011	mg	15692	23
				supplier	glue	Di-ethylhexanoylperoxy dimethylhexane	13052-09-0		0.011	mg	15692	23
				supplier	glue	Butylcyclohexylpercarbonate	15520-11-3		0.011	mg	15692	23
Die attach 2	M-011 Other inorganic materials	0.646	mg	supplier	tape	Epoxy resin	25068-38-6		0.407	mg	630031	834
				supplier	tape	Polypropylene	9003-07-0		0.013	mg	20124	27
				supplier	tape	epoxy resin	29690-82-2		0.065	mg	100619	133
				supplier	tape	Propenoate polymer	538311-13-6		0.129	mg	199690	264
				supplier	tape	Bisphenol A diglycidyl ether	1675-54-3		0.032	mg	49536	66
Soft solder	Solder	1.668	mg	SVHC	solder	Lead(Pb)	7439-92-1	7a-Lead in high melting temper	1.626	mg	974820	3332
				supplier	solder	Silver(Ag)	7440-22-4		0.025	mg	14988	51
				supplier	solder	Tin(Sn)	7440-31-5		0.017	mg	10192	35
Bonding wires	M-008 Precious metals	0.887	mg	supplier	wire	Gold(Au)	7440-57-5		0.887	mg	1000000	1818
Bonding wires 2	M-004 Copper and its alloys	1.419	mg	supplier	wire	Copper(Cu)	7440-50-8		1.419	mg	1000000	2908
Encapsulation	M-011 Other inorganic materials	303.850	mg	supplier	mold compound	Silica vitreous	60676-86-0		268.907	mg	884999	551039
				supplier	mold compound	Biphenyl epoxy resin	85954-11-6		16.104	mg	53000	33000
				supplier	mold compound	Phenol resin	205830-20-2		12.154	mg	40000	24906
				supplier	mold compound	Epoxy type resin	proprietary		6.077	mg	20000	12453
				supplier	mold compound	Carbon black	1333-86-4		0.608	mg	2001	1246
connections coating	Solder	4.252	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		4.252	mg	1000000	8713