



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 *	2020-03-24
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
VNH7013XPTR-E	ARG(*VH39BBY	A	959	2020-03-24
	Amount	UoM	Unit type	ST ECOPACK Grade
	481	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	260	3		
Bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
Not Applicable	Tin (Sn), matte, annealed	Copper Alloy	DM00186029	

Package Designator	Size	Nbr of instances	Shape	
DSO	10.30,7.50,2.28	36	gull wing	
Comment	PSSO36L TRIPLE PAD. MDF valid for CPs: VNH7013XP-E,VNH7013XPTR-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	143
Lead	6.36	soft solder	13209

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	6.36	Soft solder	13209
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	6.359	Soft solder	975008

Material Composition Declaration :						Mfr Item Name	ARG(*VH39BBY					
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	12.491	mg	supplier	die	Silicon(Si)	7440-21-3		11.714	mg	937795	24333
				supplier	metallisation	Aluminium(Al)	7429-90-5		0.072	mg	5764	150
				supplier	metallisation	Copper(Cu)	7440-50-8		0.097	mg	7766	201
				supplier	metallisation	Gold(Au)	7440-57-5		0.017	mg	1361	35
				supplier	metallisation	Nickel(Ni)	7440-02-0		0.069	mg	5524	143
				supplier	metallisation	Titanium(Ti)	7440-32-6		0.312	mg	24978	648
				supplier	metallisation	Vanadium(V)	7440-62-2		0.005	mg	400	10
				supplier	Passivation	Silicon nitride(SiN)	12033-89-5		0.055	mg	4403	114
				supplier	passivation	Silicon oxide	7631-86-9		0.150	mg	12009	312
				supplier	alloy & coating	Copper(Cu)	7440-50-8		147.441	mg	973150	306275
Leadframe	M-004 Copper and its alloys	151.509	mg	supplier	alloy & coating	Iron(Fe)	7439-89-6		3.468	mg	22890	7204
				supplier	alloy & coating	Iron Phosphide(FeP)	26508-33-8		0.209	mg	1379	434
				supplier	alloy & coating	Zinc(Zn)	7440-66-6		0.182	mg	1201	378
				supplier	alloy & coating	Silver (Ag)	7440-22-4		0.209	mg	1380	435
				supplier	solder	Lead(Pb)	7439-92-1	7a-Lead in high melting temper	6.359	mg	975008	13209
Soft solder	Solder	6.522	mg	supplier	solder	Silver(Ag)	7440-22-4		0.098	mg	15026	204
				supplier	solder	Tin(Sn)	7440-31-5		0.065	mg	9966	135
				supplier	wire	Copper(Cu)	7440-50-8		4.869	mg	1000000	10114
Bonding wires	M-004 Copper and its alloys	4.869	mg	supplier	wire	Copper(Cu)	7440-50-8		4.869	mg	1000000	10114
				supplier	mold compound	Silica vitreous	60676-86-0		267.055	mg	885000	554747
				supplier	mold compound	Biphenyl epoxy resin	85954-11-6		15.993	mg	53000	33222
				supplier	mold compound	Phenol resin	205830-20-2		12.070	mg	39999	25073
				supplier	mold compound	Epoxy type resin	proprietary		6.035	mg	20000	12536
Encapsulation	M-011 Other inorganic materials	301.757	mg	supplier	mold compound	Carbon black	1333-86-4		0.604	mg	2001	1255
				supplier	solder alloy	Tin (Sn)	7440-31-5		4.252	mg	1000000	8833
connections coating	Solder	4.252	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		4.252	mg	1000000	8833