



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 *	2019-11-26
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 *	Antonella Lanzafame	Representative Title	AMS 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 *	Legal Declaration *
	true	Standard

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
VIPER222LSTR	1MW4*MV8FACA	A	Z9LA-999L	2019-11-26
Amount	UoM	Unit type	ST ECOPACK Grade	
81	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		

Package Designator	Size	Nbr of instances	Shape	
DSO	4.85x3.9x1.52	10	gull wing	
Comment	W4 SSOP 10L 3.9 BODY 1 PITCH			

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	TRUE
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)	FALSE
4 - Product(s) does not meet EU RoHS requirements and is not under exemptions	FALSE
Exemption Id.	Description

QueryList : ELV directive : ELV directive : 2000/53/EC amended 2017/2096 _November 2017	
Query	Response
1 - Product(s) meets EU ELV requirements without any exemptions	TRUE
2 - Product(s) meets EU RoHS requirements by application of the selected exemption(s)	FALSE
Exemption Id.	Description

QueryList : California Prop65 list, dated 7th July 2017			
Query			Response
1 - The product does not contain identified substance from California Prop 65 List, no exposure to consumers is foreseen			TRUE
2 - The product is containing below substance(s) from California Prop 65 List, no exposure to consumers is foreseen			FALSE
Substance	amount in product (mg)	Application	ppm in product
Nickel	0.02	alloy	284

QueryList :Customer	
Query	Response

QueryList : Chinese RoHS , references : SJT 11364 – 2014 and GBT 26572 – 2014				
Query				Response
1 - Product(s) requires marking for the presence of restricted substances and must be marked with an Environmental Protection Use Period under China's Measures for Administration of the control of pollution by Electronic Information Products				FALSE
2 - Product(s) is eligible for marking with the e code under China's Measures for Administration of the control of pollution by Electronic Information Products				FALSE
Hasardous substance				
Lead (Pb)	Cadmium (Cd)	Mercury (Hg)	Hexavalent Chromium (Cr VI)	PBB & PBDE

QueryList : REACH-16th July 2019				
Query				Response
1 - Product(s) does not contain REACH Substances Of Very High Concern above the limits per the definition within REACH				true
CategoryLevel_Name	CategoryLevel_Threshold	amount in product (mg)	Application	ppm in product

Material Composition Declaration :
 note : Substance present with less 0.001mg will not be declared in this document

						Mfr Item Name	1MW4*MV8FACA				6000001.0	999967.0
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	3.447	mg	supplier	die	Silicon (Si)	7440-21-3		3.323	mg	964027	41025
				supplier	metallization	Aluminium (Al)	7429-90-5		0.044	mg	12765	543
				supplier	metallization	Titanium (Ti)	7440-32-6		0.001	mg	290	12
				supplier	metallization	Tungsten (W)	7440-33-7		0.001	mg	290	12
				supplier	Passivation	Silicon Nitride	12033-89-5		0.014	mg	4062	173
				supplier	Passivation	Silicon Oxide	7631-86-9		0.034	mg	9864	420
				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.001	mg	290	12
				supplier	back side metallization	Chromium (Cr)	7440-47-3		0.001	mg	290	12
				supplier	back side metallization	Gold (Au)	7440-57-5		0.005	mg	1451	62
Leadframe	M-004 Copper and its alloys	31.340	mg	supplier	Alloy	Copper (Cu)	7440-50-8		29.240	mg	932993	360988
				supplier	Alloy	Iron (Fe)	7439-89-6		0.783	mg	24984	9667
				supplier	Alloy	Phosphorus (P)	7723-14-0		0.031	mg	989	383
				supplier	Alloy	Zinc (Zn)	7440-66-6		0.031	mg	989	383
				JIG - R	Alloy	Lead (Pb)	7439-92-1		0.002	mg	64	25
				supplier	Alloy	Silver (Ag)	7440-22-4		1.253	mg	39981	15469
Die attach	M-015 Other organic materials	1.033	mg	supplier	glue	Silver (Ag)	7440-22-4		0.827	mg	800581	10210
				supplier	glue	Acrylate monomer	61434-04-6		0.103	mg	99710	1272
				supplier	glue	Acrylate oligomer	Proprietary		0.057	mg	55179	704
				supplier	glue	Bismaleimide resin	Proprietary		0.041	mg	39690	506
				supplier	glue	Epoxy resin	26875-67-2		0.005	mg	4840	62
Bonding wires	M-008 Precious metals	0.702	mg	supplier	wire	Gold (Au)	7440-57-5		0.702	mg	1000000	8667
Encapsulation	M-015 Other organic materials	42.406	mg	supplier	Mold compound	Epoxy Resin 1	Proprietary		0.254	mg	5990	3136
				supplier	Mold compound	Epoxy Resin 2	29690-82-2		0.254	mg	5990	3136
				supplier	Mold compound	Epoxy Resin 3	Proprietary		0.254	mg	5990	3136
				supplier	Mold compound	Phenol Resin	Proprietary		0.933	mg	22002	11519
				supplier	Mold compound	Carbon black	1333-86-4		0.042	mg	990	519
				supplier	Mold compound	Amorphous silica	60676-86-0		39.652	mg	935056	489531
				supplier	Mold compound	Crystal silica	14808-60-7		1.017	mg	23982	12556
connections coating	Solder	2.068	mg	supplier	solder alloy	Tin(Sn)	7440-31-5		2.069	mg	1000000	25543