



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 *	2020-05-04
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 *	Floriana SAN BIAGIO	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 *	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
0	VHSA*M431AC6	A	994X	2020-05-04
	Amount	UoM	Unit type	ST ECOPACK Grade
	220	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
Not Applicable	260	3		
Bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
Not Applicable	Tin (Sn), matte, annealed	Copper Alloy	0	

Package Designator	Size	Nbr of instances	Shape	
SIP	4.6 x 4.6	3	through-hole	
Comment	SA TO 92 Epoxy; MDF is valid for TL1431ACZ-TL1431ACZ_AP-TL1431ACZT-TL1431CZ_AP			

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 : 2000/53/EC amended 2020/363_March 2020	
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 3rd January 2020			
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

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				TRUE
CategoryLevel_Name	CategoryLevel_Threshold	amount in product (mg)	Application	ppm in product
,	0			
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				TRUE
CategoryLevel_Name	CategoryLevel_Threshold	Amount in Embedded Article / Homogeneous Material (mg)	Application - Article / Homogeneous Material	ppm in Article /Homogeneous Material
,	0		,	

QueryList : Korea Chemical Control Act_ 27 Dec 2017 update				
Query				Response
The Product does contain at least one of the substances listed in Chemical Control Act				NO
Substance	Homogeneous Material impacted	Content in Homogeneous Material (mg)	Concentration in the material(%)	Application Purpose

Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	VHSA*M431AC6				6000001.0	995906.0
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	0.429	mg	supplier	die	Silicon(Si)	7440-21-3		0.422	mg	983683	1918
				supplier	metallisation	Aluminium(Al)	7429-90-5		0.003	mg	6993	14
				supplier	Passivation	Silicon nitride(SiN)	12033-89-5		0.002	mg	4662	9
				supplier	passivation	Silicon oxide	7631-86-9		0.002	mg	4662	9
Leadframe	M-004 Copper and its alloys	85.900	mg	supplier	alloy & coating	Copper(Cu)	7440-50-8		85.737	mg	998102	389714
				supplier	alloy & coating	Iron(Fe)	7439-89-6		0.129	mg	1502	586
				supplier	alloy & coating	Phosphorus metal	7723-14-0		0.034	mg	396	155
Die attach	M-015 Other organic materials	0.670	mg	supplier	glue	Silver (Ag)	7440-22-4		0.536	mg	800000	2436
				supplier	glue	Bisphenol-F epichlorhydrin resin	9003-36-5		0.100	mg	149254	455
				supplier	glue	Propylene carbonate	108-32-7		0.034	mg	50746	155
Bonding wires	M-008 Precious metals	0.048	mg	supplier	wire	Gold (Au)	7440-57-5		0.048	mg	1000000	218
				supplier	Mold compound	Si-oxide Quartz	14808-60-7		113.000	mg	899990	513636
Encapsulation	M-011 Other inorganic materials	125.557	mg	supplier	Mold compound	Formaldehyde,polymer with oxirane and 2-me	29690-82-2		8.790	mg	70008	39955
				supplier	Mold compound	Phenol-formaldehyde polymer	9003-35-4		3.139	mg	25001	14268
				supplier	Mold compound	Carbon Black	1333-86-4		0.628	mg	5002	2855
connections coating	Solder	6.495	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		6.495	mg	1000000	29523