



Materials Declaration Form

IPC Form Type *	1752 Distribute	Version	2
Sectionals *	Material Info Manufacturing Info	Subsectionals *	A-D <i>* : Required Field</i>

Supplier Information			
Company Name *	STMicroelectronics	Response Date *	2020-02-20
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

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 Name	Version	Mfr Site	Date
	HVVV*U1L5AA5	A	9992-ZS1A	2020-02-20
	Amount	UoM	Unit type	ST ECOPACK Grade
	16	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
1	260	3		
Bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
Not Applicable	Nickel/Palladium/Gold (Ni/Pd/Au)	Copper Alloy	0	

Package Designator	Size	Nbr of instances	Shape	
SOT	2.8 x 1.5	5	gull wing	
Comment	WV SOT 23 5L; MDF is valid for STLQ015M21R			

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 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 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

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
,				
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
,			,	

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	HVVV*U1LSAA5				4999857.0	9999850.0
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	0.339	mg	supplier	die	Silicon(Si)	7440-21-3		0.320	mg	943953	20000
				supplier	metallisation	Aluminium(Al)	7429-90-5		0.004	mg	11799	250
				supplier	metallisation	Tungsten(W)	7440-33-7		0.003	mg	8850	188
				supplier	Passivation	Silicon nitride(SiN)	12033-89-5		0.001	mg	2950	63
				supplier	passivation	Silicon oxide	7631-86-9		0.007	mg	20649	438
				supplier	polymer coating	polyimide	proprietary		0.004	mg	11799	250
Leadframe	M-004 Copper and its alloys	7.063	mg	supplier	alloy & coating	Copper(Cu)	7440-50-8		6.831	mg	967153	426938
				supplier	alloy & coating	Nickel(Ni)	7440-02-0		0.071	mg	10052	4438
				supplier	alloy & coating	Iron(Fe)	7439-89-6		0.148	mg	20954	9250
				supplier	alloy & coating	Zinc(Zn)	7440-66-6		0.004	mg	566	250
				supplier	alloy & coating	Palladium(Pd)	7440-05-3		0.007	mg	991	438
				supplier	alloy & coating	Gold(Au)	7440-57-5		0.001	mg	142	63
Die attach	M-015 Other organic materials	0.034	mg	supplier	glue	Silver (Ag)	7440-22-4		0.029	mg	852941	1813
				supplier	glue	Carbocyclic acrylate	Proprietary		0.003	mg	88235	188
				supplier	glue	2-Propenoic acid, 2-methyl-, 2-[(2,3,3a,4,7,7a)]	68586-19-6		0.002	mg	58824	125
Bonding wires	M-008 Precious metals	0.158	mg	supplier	wire	Gold (Au)	7440-57-5		0.158	mg	1000000	9875
Encapsulation	M-015 Other organic materials	8.405	mg	supplier	mold compound	Epoxy Resin-1	Proprietary		0.168	mg	19988	10500
				supplier	mold compound	Epoxy Resin-2	25068-38-6		0.168	mg	19988	10500
				supplier	mold compound	Phenol resin	29690-82-2		0.336	mg	39976	21000
				supplier	mold compound	Amorphous Silica	60676-86-0		7.481	mg	890665	467563
				supplier	mold compound	Carbon Black	1333-86-4		0.042	mg	4997	2625
				supplier	mold compound	Crystalline silica	14808-60-7		0.210	mg	24985	13125