



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 *	2020-06-18
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
	VRWV*U1F8AB5	A	9992	2020-06-18
	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		

Package Designator	Package Size	Nbr of instances	Shape	
DSO	2.8 x 1.52	5	Gull wing	
Comment	WV SOT 23 5L; MDF is valid for LDK320AM30R			

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			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	0.08	alloy&coating	4938

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				false
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	VRWV*U1F8A5				5000000.0	997382.0
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	0.441	mg	supplier	die	Silicon(Si)	7440-21-3		0.417	mg	945578	26063
				supplier	metallisation	Aluminium(Al)	7429-90-5		0.005	mg	11338	313
				supplier	metallisation	Tungsten(W)	7440-33-7		0.004	mg	9070	250
				supplier	Passivation	Silicon nitride(SiN)	12033-89-5		0.001	mg	2268	63
				supplier	passivation	Silicon oxide	7631-86-9		0.009	mg	20408	563
				supplier	polymer coating	polyimide	proprietary		0.005	mg	11338	313
Leadframe	M-004 Copper and its alloys	6.918	mg	supplier	alloy & coating	Copper(Cu)	7440-50-8		6.668	mg	963862	416750
				supplier	alloy & coating	Nickel(Ni)	7440-02-0		0.079	mg	11419	4938
				supplier	alloy & coating	Iron(Fe)	7439-89-6		0.154	mg	22261	9625
				supplier	alloy & coating	Zinc(Zn)	7440-66-6		0.009	mg	1301	563
				supplier	alloy & coating	Palladium(Pd)	7440-05-3		0.007	mg	1012	438
				supplier	alloy & coating	Gold(Au)	7440-57-5		0.001	mg	145	63
Die attach	M-015 Other organic materials	0.064	mg	supplier	glue	Silver (Ag)	7440-22-4		0.044	mg	687500	2750
				supplier	glue	methylene diacrylate	42594-17-2		0.016	mg	250000	1000
				supplier	glue	Dicyclopentenyloxyethyl methacrylate	68586-19-6		0.002	mg	31250	125
				supplier	glue	Polymer of Polybutadiene + Anhydride	Proprietary		0.002	mg	31250	125
Bonding wires	M-004 Copper and its alloys	0.141	mg	supplier	wire	Copper (Cu)	7440-50-8		0.141	mg	1000000	8813
Encapsulation	M-011 Other inorganic materials	8.394	mg	supplier	mold compound	Silica, vitreous	60676-86-0		7.577	mg	902669	473563
				supplier	mold compound	phenolic resin	29690-82-2		0.295	mg	35144	18438
				supplier	mold compound	epoxy resin	25068-38-6		0.337	mg	40148	21063
				supplier	mold compound	Biphenyl epoxy resin	85954-11-6		0.168	mg	20014	10500
				supplier	mold compound	carbon black	1333-86-4		0.017	mg	2025	1063