



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 *	2020-03-10
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 Number	Mfr Item Name	Version	Mfr Site	Date
	HVAR*UP21AB5	B	9992-ZS1A	2020-03-10
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	2.9 x 1.6	5	0	
Comment	AR TSOT23-5L; MDF is valid for ST1S12GR			

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
Nickel	0.08	leadframe	5188

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	HVAR*UP21AB5				4999999.0	1002006.0
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	0.613	mg	supplier	die	Silicon(Si)	7440-21-3		0.579	mg	944535	36188
				supplier	metallisation	Aluminium(Al)	7429-90-5		0.009	mg	14682	563
				supplier	metallisation	Tungsten(W)	7440-33-7		0.007	mg	11419	438
				supplier	Passivation	Silicon nitride(SiN)	12033-89-5		0.002	mg	3263	125
				supplier	passivation	Silicon oxide	7631-86-9		0.016	mg	26101	1000
Leadframe	M-004 Copper and its alloys	7.239	mg	supplier	alloy & coating	Copper(Cu)	7440-50-8		6.974	mg	963393	435875
				supplier	alloy & coating	Nickel(Ni)	7440-02-0		0.083	mg	11466	5188
				supplier	alloy & coating	Iron(Fe)	7439-89-6		0.163	mg	22517	10188
				supplier	alloy & coating	Iron Phosphide(FeP)	26508-33-8		0.002	mg	276	125
				supplier	alloy & coating	Zinc(Zn)	7440-66-6		0.009	mg	1243	563
Die attach	M-015 Other organic materials	0.070	mg	supplier	alloy & coating	Palladium(Pd)	7440-05-3		0.007	mg	967	438
				supplier	alloy & coating	Gold(Au)	7440-57-5		0.001	mg	138	63
				supplier	glue	Silver (Ag)	7440-22-4		0.056	mg	800000	3500
				supplier	glue	Carbocyclic Acrylates	proprietary		0.007	mg	100000	438
				supplier	glue	Bismaleimide resin	proprietary		0.002	mg	28571	125
Bonding wires	M-008 Precious metals	0.150	mg	supplier	glue	2-preponic acid, 2-methyl	68586-19-6		0.002	mg	28571	125
				supplier	glue	Additive	proprietary		0.002	mg	28571	125
				supplier	glue	Dicumyl peroxide	80-43-3		0.001	mg	14286	63
				supplier	wire	Gold (Au)	7440-57-5		0.150	mg	1000000	9375
				supplier	mold compound	Epoxy Resin-1	Proprietary		0.239	mg	30025	14938
Encapsulation	M-011 Other inorganic materials	7.960	mg	supplier	mold compound	Epoxy Resin-2	Proprietary		0.239	mg	30025	14938
				supplier	mold compound	Phenol resin	Proprietary		0.358	mg	44975	22375
				supplier	mold compound	Silica	60676-86-0		7.108	mg	892965	444250
				supplier	mold compound	Carbon Black	1333-86-4		0.016	mg	2010	1000