



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 *	2020-12-09
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 Material Declaration 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


While STMicroelectronics has endeavored to provide information which is accurate and up to date, this document and its contents are provided on a strict 'as is' and 'as available' basis. STMicroelectronics disclaims all warranties, express or implied related to this document and its contents, including but not limited to implied warranties of completeness, truth, accuracy, merchantability, fitness for a particular purpose and non-infringement. ST shall have no responsibility and assumes no liability for any cost, loss or damage of any kind which could arise, directly or indirectly, from the use or inability to use this document and/or its contents.

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
LD39020ATPU33R	MFBB*UAT4AB5	A	Z8GA	2020-12-09
	Amount	UoM	Unit type	ST ECOPACK Grade
	1.94	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	
qfn	1 x 1	4	Flat	
Comment	A0TH VFDFPN 1.0X1.0X0.38 4L PITCH 0,6			

QueryList : RoHS Directive 2011/65/EU- 8 June 2011 – Annex II amended by Delegated Directive 2015/863 - 31 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

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
o	O	O	O	O

QueryList : REACH-25th June 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 : Responsible metals sourcing	
Query	Response
The component is containing at least one of the following metals : Cobalt , Gold , Tantalum , Tin , Tungsten.	true
The following metals are present in the component :	Gold, Tin,
This product is in the scope of the responsible metals sourcing, its compliance is covered by our company processes .	

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	MFBF*UAT4AB5		1.9405		5000000.0	1000255.0
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	0.077	mg	supplier	die	Silicon(Si)	7440-21-3		0.061	mg	792208	31443
				supplier	metallisation	Aluminium(Al)	7429-90-5		0.001	mg	12987	515
				supplier	metallisation	Copper(Cu)	7440-50-8		0.010	mg	129870	5155
				supplier	passivation	Silicon oxide	7631-86-9		0.005	mg	64935	2577
				supplier	alloy	Copper(CU)	7440-50-8		1.780	mg	987243	917526
Leadframe	M-004 Copper and its alloys	1.803	mg	supplier	alloy	Chromium(Cr)	7440-47-3		0.005	mg	2773	2577
				supplier	alloy	Zinc(Zn)	7440-66-6		0.004	mg	2219	2062
				supplier	alloy	Tin(Sn)	7440-31-5		0.005	mg	2773	2577
				supplier	alloy	Nickel (Ni)	7440-02-0		0.003	mg	1664	1546
				supplier	alloy	Palladium (Pd)	7440-05-3		0.003	mg	1664	1546
				supplier	alloy	Gold (Au)	7440-57-5		0.003	mg	1664	1546
				supplier	glue	Silver(Ag)	7440-22-4		0.030	mg	789474	15464
				supplier	glue	Epoxy	29690-82-2		0.003	mg	78947	1546
Die attach	M-011 Other inorganic materials	0.038	mg	supplier	glue	Anhydride	proprietary		0.003	mg	78947	1546
				supplier	glue	Epoxy resin	29690-82-2		0.001	mg	26316	515
				supplier	glue	Ethylene glycol monobutyl ether acetate	112-07-2		0.001	mg	26316	515
				supplier	wire	Gold (Au)	7440-57-5		0.020	mg	1000000	10309
Bonding wires	M-008 Precious metals	0.020	mg	supplier	wire	Gold (Au)	7440-57-5		0.020	mg	1000000	10309
Encapsulation	M-011 Other inorganic materials	0.003	mg	supplier	mold compound	Epoxy Resin	Proprietary		0.0001	mg	40000	52
				supplier	mold compound	Biphenyl epoxy resin	85954-11-6		0.0001	mg	40000	52
				supplier	mold compound	Phenol Resin	9003-35-4		0.0001	mg	40000	52
				supplier	mold compound	Magnesium hydroxide	1309-42-8		0.0002	mg	80000	103
				supplier	mold compound	Amorphous silica	80676-86-0		0.0020	mg	800000	1031