



Materials Declaration Form

IPC Form Type *	1752 Distribute	Version	2
Sectionals *	Material Info Manufacturing Info	Subsectionals *	A-D

** : Required Field*

Supplier Information			
Company Name *	STMicroelectronics	Response Date *	2019-12-17
Company Unique ID	NL 008751171B01		
Contact Name *	Refer to Supplier Comment section	Contact Email *	Refer to Supplier Comment section
Contact Phone *	Refer to Supplier Comment section	Representative Title	AMS MD CHAMPION
Authorized Representative *	Floriana SAN BIAGIO	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
	MQBF*U1F5AB5	A	996H-Z6HA	2019-12-17
	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		
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	
QFN	1.2 x 1.3	6	flat	
Comment	A0W4 VFDFPN 6L 1.2X1.3X0.45 0.4 P; MDF is valid for LDK220PU40R			

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 13th September 2019				
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	0.01	LF coating	7216	

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-16th July 2019				
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	MQBF*U1F5AB5				5000000.0	1001026.0
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	0.189	mg	supplier	die	Silicon(Si)	7440-21-3		0.166	mg	878307	85567
				supplier	metallisation	Aluminium(Al)	7429-90-5		0.005	mg	26455	2577
				supplier	metallisation	Tungsten(W)	7440-33-7		0.004	mg	21164	2062
				supplier	Passivation	Silicon nitride(SiN)	12033-89-5		0.001	mg	5291	515
				supplier	passivation	Silicon oxide	7631-86-9		0.008	mg	42328	4124
				supplier	polymer coating	PIX1 Gamma-butyrolactone	96-48-0		0.005	mg	26455	2577
				supplier	alloy & coating	Copper(Cu)	7440-50-8		0.431	mg	949339	222165
Leadframe	M-004 Copper and its alloys	0.454	mg	supplier	alloy & coating	Nickel(Ni)	7440-02-0		0.014	mg	30837	7216
				supplier	alloy & coating	Iron(Fe)	7439-89-6		0.001	mg	2203	515
				supplier	alloy & coating	Zinc(Zn)	7440-66-6		0.005	mg	11013	2577
				supplier	alloy & coating	Magnesium(Mg)	7439-95-4		0.001	mg	2203	515
				supplier	alloy & coating	Palladium(Pd)	7440-05-3		0.001	mg	2203	515
				supplier	alloy & coating	Gold(Au)	7440-57-5		0.001	mg	2203	515
				supplier	alloy & coating							
Die attach	M-015 Other organic materials	0.031	mg	supplier	glue	Epoxyde Bisphenol A Resin	25068-38-6		0.003	mg	96774	1546
				supplier	glue	Diaminodiphenylsulfone	80-08-0		0.001	mg	32258	515
				supplier	glue	Ethoxyethoxy-ethyl Acetate	112-15-2		0.007	mg	225806	3608
				supplier	glue	Bisphenol A diglycidyl ether polymer	25036-25-3		0.004	mg	129032	2062
				supplier	glue	Glycol ether ester	Proprietary		0.001	mg	32258	515
				supplier	glue	Silica, vitreous	60676-86-0		0.009	mg	290323	4639
				supplier	glue	Aluminium oxide	1344-28-1		0.006	mg	193548	3093
Bonding wires	M-008 Precious metals	0.019	mg	supplier	wire	Gold (Au)	7440-57-5		0.019	mg	1000000	9794
Encapsulation	M-015 Other organic materials	1.249	mg	supplier	mold compound	Silica, vitreous	60676-86-0		1.157	mg	926341	596392
				supplier	mold compound	epoxy resin	85954-11-6		0.050	mg	40032	25773
				supplier	mold compound	phenol resin	26834-02-6		0.037	mg	29624	19072
				supplier	mold compound	carbon black	1333-86-4		0.005	mg	4003	2577