



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 *	2022-03-29
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 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
	MQDC*U1S5AF5	A	996H	2022-03-29
Amount	UoM	Unit type	ST ECOPACK Grade	
39	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	Tin (Sn), matte, annealed	Copper Alloy		

Package Designator	Package Size	Nbr of instances	Shape	
QFN	3.5 x 4.5	20	Flat	
Comment	B09N QFN 3.5X4.5X1.0 20L PITCH 0.50; MDF is valid for L3751PUR			

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 : California Prop65 list, dated 25th Feb 2022			
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	0.012	die	308
Lead	0.000		0
Lead-Borate Glass	0.000		0
Lead Zirconate Titanate	0.000		0
Antimony trioxide	0.000		0
Bisphenol A	0.000		0

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
0	0	0	0	0

QueryList : REACH-17 Jan 2022				
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			

China GB 33372-2020 Limit standard for volatile organic compounds content in adhesives - 4 March 2020 application date 1st December 2020	
Query	Response
The product contains adhesives identified under GB 33372	false

Stockholm Convention Persistent Organic Pollutants	
Query	Response
Product is compliant with Stockholm Convention Persistent Organic Pollutants Annex I	true

Material Composition Declaration : note : Substance present with less 0.001mg. will not be declared in this document						Mfr Item Name	MQDC*U1SSAF5		38.9000		5999999.0	999999.0
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	3.143	mg	supplier	die	Silicon(Si)	7440-21-3		3.122	mg	993318	80257
				supplier	metallisation	Chromium(Cr)	7440-47-3		0.002	mg	636	51
				supplier	metallisation	Gold(Au)	7440-57-5		0.006	mg	1909	154
				supplier	metallisation	Nickel(Ni)	7440-02-0		0.012	mg	3818	308
				supplier	metallisation	Vanadium(V)	7440-62-2		0.001	mg	318	26
Leadframe	M-004 Copper and its alloys	13.679	mg	supplier	alloy	Copper(Cu)	7440-50-8		13.299	mg	972220	341877
				supplier	alloy	Iron(Fe)	7439-89-6		0.313	mg	22882	8046
				supplier	alloy	Phosphorus(P)	7723-14-0		0.004	mg	292	103
				supplier	alloy	Zinc(Zn)	7440-66-6		0.021	mg	1535	540
				supplier	metallization	Silver (Ag)	7440-22-4		0.042	mg	3070	1090
Die attach	M-015 Other organic materials	0.490	mg	supplier	glue	Silver(Ag)	7440-22-4		0.424	mg	865000	10896
				supplier	glue	2-Propionic acid, methyl ester reaction product	Proprietary		0.049	mg	100000	1260
				supplier	glue	2-Propenoic acid, 2-methyl-, 2-[(2,3,3a,4,7,7a)g]	68586-19-6		0.015	mg	30000	378
				supplier	glue	Bis(, alpha-, alpha-Dimethylbenzyl) peroxide	80-43-3		0.001	mg	2000	25
				supplier	glue	2-(3,4-Epoxy-cyclohexyl)ethyltrimethoxysilane	3388-04-3		0.001	mg	3000	38
Bonding wires	M-004 Copper and its alloys	0.134	mg	supplier	wire	Copper(Cu)	7440-50-8		0.130	mg	970000	3341
				supplier	wire	Palladium(Pd)	7440-05-3		0.004	mg	30000	103
Encapsulation	M-015 Other organic materials	20.861	mg	supplier	mold compound	Epoxy resin	Proprietary		0.212	mg	10139	5437
				supplier	mold compound	Phenol resin	Proprietary		0.212	mg	10139	5437
				supplier	mold compound	Silica (Amorphous) A	60676-86-0		17.530	mg	840318	450640
				supplier	mold compound	Silica (Amorphous) B	7631-86-9		2.855	mg	136870	73400
				supplier	mold compound	Carbon Black	1333-86-4		0.053	mg	2535	1359
Connections coating	Solder	0.593	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		0.593	mg	1000000	15243