



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 *	2020-09-11
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
	8842*UK018B6	A	P1C7	2020-09-11
Amount	UoM	Unit type	ST ECOPACK Grade	
71	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	
3	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	5 x 5	32	Flat	
Comment	42 VFQFPN 5X5x1.0 32L PITCH 0.5; MDF is valid for PM6686TR			

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	1.05	die backside met/alloy	14789

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 : 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	8842*UK01B86	71.0		4999998.0	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	4.431	mg	supplier	die	Silicon(Si)	7440-21-3		4.150	mg	936583	58451
				supplier	metallisation	Aluminium(Al)	7429-90-5		0.037	mg	8350	521
				supplier	metallisation	Chromium(Cr)	7440-47-3		0.003	mg	677	42
				supplier	metallisation	Gold(Au)	7440-57-5		0.009	mg	2031	127
				supplier	metallisation	Nickel(Ni)	7440-02-0		0.029	mg	6545	408
				supplier	metallisation	Tungsten(W)	7440-33-7		0.059	mg	13315	831
				supplier	Passivation	Silicon nitride(SiN)	12033-89-5		0.009	mg	2031	127
				supplier	passivation	Silicon oxide	7631-86-9		0.091	mg	20537	1282
				supplier	polymer coating	proprietary			0.044	mg	9930	620
				Leadframe	M-015 Other organic materials	62.527	mg	supplier	alloy	Copper(Cu)	7440-50-8	
supplier	alloy	Iron(Fe)	7439-89-6						1.407	mg	22502	19817
supplier	alloy	Iron phosphide	1310-43-6						0.085	mg	1359	1197
supplier	alloy	Zinc(Zn)	7440-66-6						0.074	mg	1183	1042
supplier	metallization	Nickel (Ni)	7440-02-0						1.021	mg	16329	14380
supplier	metallization	Palladium (Pd)	7440-05-3						0.115	mg	1839	1620
supplier	metallization	Gold (Au)	7440-57-5						0.018	mg	288	254
supplier	glue	Silver(Ag)	7440-22-4						0.668	mg	800000	9408
Die attach	M-015 Other organic materials	0.835	mg	supplier	glue	Methylene diacrylate polymer	42594-17-2		0.137	mg	164072	1930
				supplier	glue	Dicyclopentenyloxyethyl methacrylate	68586-19-6		0.021	mg	25150	296
				supplier	glue	Epoxy-cyclohexylethyltrimethoxysilane	3388-04-3		0.004	mg	4790	56
				supplier	glue	Bis(α,α-dimethylbenzyl) peroxide	80-43-3		0.004	mg	4790	56
				supplier	glue	Palladium (Pd)	7440-05-3		0.001	mg	1198	14
				supplier	wire	Gold(Au)	7440-57-5		0.549	mg	989189	7732
Bonding wires	M-008 Precious metals	0.555	mg	supplier	wire	Palladium(Pd)	7440-05-3		0.006	mg	10811	85
				supplier	wire	Palladium(Pd)	7440-05-3		0.006	mg	10811	85
Encapsulation	M-015 Other organic materials	2.652	mg	supplier	mold compound	Silica vitreous	60676-86-0		2.262	mg	852941	31859
				supplier	mold compound	Epoxy type resin	proprietary		0.106	mg	39970	1493
				supplier	mold compound	Phenol type resin	proprietary		0.093	mg	35068	1310
				supplier	mold compound	Magnesium hydroxide	1309-42-8		0.106	mg	39970	1493
				supplier	mold compound	Biphenyl epoxy resin	85954-11-6		0.053	mg	19985	746
				supplier	mold compound	Zinc hydroxide	20427-58-1		0.027	mg	10181	380
				supplier	mold compound	Carbon black	1333-86-4		0.005	mg	1885	70