



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 *	2019-08-12
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 *	Giovanni Giacopello	Representative Title	ADG 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
STP18N60M2	TLDZ*MQ6GB81	A	BOUSKOURA B/E	2019-08-12
	Amount	UoM	Unit type	ST ECOPACK Grade
	1900	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
Not Applicable	Not Applicable	3		
Bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
Not Applicable	Nickel/Palladium/Gold (Ni/Pd/Au)	Copper Alloy	DM00215397	

Package Designator	Size	Nbr of instances	Shape
SIP	10,9.1,4.5	3	0
Comment	TO 220 AB NON ISOL		

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	FALSE
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)	TRUE
4 - Product(s) does not meet EU RoHS requirements and is not under exemptions	FALSE
Exemption id.	Description
7a	Lead in high melting temperature type solders (i.e. lead- based alloys containing 85 % by weight or more lead)

QueryList : ELV directive : 2000/53/EC amended 2017/2096 _November 2017	
Query	Response
1 - Product(s) meets EU ELV requirements without any exemptions	FALSE
2 - Product(s) meets EU RoHS requirements by application of the selected exemption(s)	TRUE
Exemption id.	Description
8e	Lead in high melting temperature type solders (i.e. lead-based alloys containing 85 % by weight or more lead)

QueryList : California Prop65 list, dated 28th June 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	0.72	Die - Leadframe	379
Lead	4.42	Soft solder	2326

QueryList : REACH-15th January 2019				
Query				Response
1 - Product(s) does not contain REACH Substances Of Very High Concern above the limits per the definition within REACH				FALSE
CategoryLevel_Name	CategoryLevel_Threshold	amount in product (mg)	Application	ppm in product
Lead	1000 ppm	4.42	Soft solder	2326
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				FALSE
CategoryLevel_Name	CategoryLevel_Threshold	Amount in Embedded Article / Homogeneous Material (mg)	Application - Article / Homogeneous Material	ppm in Article /Homogeneous Material
Lead	1000 ppm	4.42	Soft solder	954850

Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	TLDZ*MQ6881				7000000.0	1000000.0
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	8.361	mg	supplier	die	Silicon(Si)	7440-21-3		8.023	mg	959574	4223
				supplier	metallisation	Aluminium(Al)	7429-90-5		0.162	mg	19376	85
				supplier	metallisation	Nickel(Ni)	7440-02-0		0.056	mg	6698	29
				supplier	metallisation	Silver(Ag)	7440-22-4		0.020	mg	2392	11
				supplier	metallisation	Titanium(Ti)	7440-32-6		0.004	mg	478	2
				supplier	Passivation	Silicon nitride(SiN)	12033-89-5		0.039	mg	4665	21
				supplier	passivation	Silicon oxide	7631-86-9		0.057	mg	6817	30
				supplier	alloy & coating	Copper(Cu)	7440-50-8		1251.376	mg	998117	658619
Leadframe	M-004 Copper and its alloys	1253.737	mg	supplier	alloy & coating	Nickel(Ni)	7440-02-0		0.665	mg	530	350
				supplier	alloy & coating	Iron(Fe)	7439-89-6		1.253	mg	999	659
				supplier	alloy & coating	Iron Phosphide(Fe/P)	26508-33-8		0.376	mg	300	198
				supplier	alloy & coating	Phosphorus metal	7723-14-0		0.067	mg	54	35
				supplier	alloy & coating	Lead(Pb)	7439-92-1	7a-Lead in high melting temper	4.420	mg	954850	2326
Soft solder	Solder	4.629	mg	DVHC	solder	Silver(Ag)	7440-22-4		0.116	mg	25059	61
				supplier	solder	Tin(Sn)	7440-31-5		0.093	mg	20091	49
				supplier	wire	Aluminium (Al)	7429-90-5		0.588	mg	1000000	309
Bonding wires	M-003 Aluminum and its alloys	0.588	mg	supplier	wire	Aluminium (Al)	7429-90-5		0.146	mg	993197	77
				supplier	wire	Magnesium (Mg)	7439-95-4		0.001	mg	6803	1
Bonding wires 2	M-003 Aluminum and its alloys	0.147	mg	supplier	mold compound	Silica vitreous	60676-86-0		544.773	mg	870000	286723
				supplier	mold compound	Epoxy type resin	proprietary		62.618	mg	100001	32957
				supplier	mold compound	Phenol type resin	proprietary		15.654	mg	24999	8239
				supplier	mold compound	Carbon black	1333-86-4		3.131	mg	5000	1648
connections coating	Solder	6.362	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		6.362	mg	1000000	3348