



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 *	2019-04-30
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 Giapello	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
STGIB15CH60TS-L	IMZ4*RI64Y52	A	3068	2019-04-30
	Amount	UoM	Unit type	ST ECOPACK Grade
	9160	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	Not Applicable		
Bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
Not Applicable	Tin (Sn), matte, annealed	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
DIP	37.50 - 23.50 - 13.50	26	Through-hole	
Comment	Package: SDIP2F-26L			

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
7c-I	Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g. piezoelectronic devices, or in a glass or ceramic matrix compound

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
10a	Electrical and electronic components which contain lead in a glass or ceramic, in a glass or ceramic matrix compound, in a glass-ceramic material, or in a glass-ceramic matrix compound. This exemption does not cover the use of lead in: — glass in bulbs and glaze of spark plugs, — dielectric ceramic materials of components listed under 10(b), 10(c) and 10(d)

QueryList : California Prop65 list, dated 26th October 2018			
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	1.28	Die - Leadframe - NTC	140
Lead-Borate Glass	0.02	NTC	2

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				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

Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	IMZ4*R164Y52									
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)				
Dies	M-011 Other inorganic materials	52.599	mg	supplier	die	Silicon (Si)	7440-21-3		50.096	mg	952414	5469				
				supplier	metallization	Aluminium (Al)	7429-90-5		0.897	mg	17054	98				
				supplier	metallization	Gold (Au)	7440-57-5		0.090	mg	1711	10				
				supplier	passivation	Nickel (Ni)	7440-02-0		0.096	mg	1825	10				
				supplier	metallization	Titanium (Ti)	7440-32-6		0.018	mg	342	2				
				supplier	metallization	Tungsten (W)	7440-33-7		0.092	mg	1749	10				
				supplier	Passivation	Silicon Nitride	12033-89-5		0.187	mg	3555	20				
				supplier	Passivation	Silicon Oxide	7631-86-9		0.533	mg	10133	58				
				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.027	mg	513	3				
				supplier	back side metallization	Chromium (Cr)	7440-47-3		0.006	mg	114	1				
				supplier	back side metallization	Gold (Au)	7440-57-5		0.046	mg	875	5				
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.388	mg	7377	42				
				supplier	back side metallization	Vanadium (V)	7440-62-2		0.017	mg	323	2				
				supplier	back side metallization	Silver (Ag)	7440-22-4		0.087	mg	1654	9				
				supplier	polymer die coating	PIX1 Gamma-butyrolactone	96-48-0		0.019	mg	361	2				
				Leadframe	M-004 Copper and its alloys	2855.830	mg	supplier	alloy	Copper (Cu)	7440-50-8		2780.014	mg	973452	303495
								supplier	alloy	Iron (Fe)	7439-89-6		65.385	mg	22895	7138
supplier	alloy	Iron Phosphide (FeP)	26508-33-8						3.937	mg	1379	430				
supplier	alloy	Zinc (Zn)	7440-66-6						3.423	mg	1199	374				
supplier	metallization	Silver (Ag)	7440-22-4						3.071	mg	1075	335				
supplier	ceramic	Manganese oxide	1317-35-7						3.196	mg	639200	349				
NTC	Other inorganic materials	5.000	mg	supplier	ceramic	Nickel oxide	1313-99-1		0.799	mg	159800	87				
				supplier	ceramic	Cobalt oxide	1308-06-1		0.705	mg	141000	77				
				supplier	ceramic	Gold (Au)	7440-57-5		0.285	mg	57000	31				
				JIG - R	metallization	Lead borate Glass	65997-18-4	7c-1-Electrical and e	0.015	mg	3000	2				
				supplier	ceramic	Alumina	1344-28-1		1157.113	mg	433700	126322				
DBC		2668.004	mg	supplier	ceramic	Calcium oxide	1305-78-8		18.196	mg	6820	1986				
				supplier	metallization	Copper (Cu)	7440-50-8		1492.695	mg	559480	162958				
				supplier	glue	Silver (Ag)	7440-22-4		1.837	mg	759719	201				
Die attach		2.418	mg	supplier	glue	Oxiranylmethoxy-phenyl-methylene-bisoxirane	13561-08-5		0.290	mg	119934	32				
				supplier	glue	Phenol resin	9003-35-4		0.073	mg	30190	8				
				supplier	glue	epoxypropoxy butane polymer	2425-79-8		0.073	mg	30190	8				
				supplier	glue	Diglycidyl phenyl allyl ether	EC 417-470-1		0.121	mg	50041	13				
				supplier	glue	Polyoxypropylenediamine	9046-10-6		0.024	mg	9926	3				
				supplier	solder	Tin (Sn)	7440-31-5		31.508	mg	964905	3440				
Soft solder	Solder	32.654	mg	supplier	solder	Silver (Ag)	7440-22-4		1.143	mg	35003	125				
				SVHC	solder	Lead (Pb)	7439-92-1		0.003	mg	92	0				
				supplier	wire	Gold (Au)	7440-57-5		0.012	mg	6319	1				
				supplier	wire	Copper (Cu)	7440-50-8		0.881	mg	463928	96				
Bonding wires	M-008 Precious metals	1.899	mg	supplier	wire	Aluminium (Al)	7429-90-5		1.006	mg	529753	110				
	M-004 Copper and its alloys			supplier	wire	Quartz	14808-60-7		1838.454	mg	550000	200705				
	M-003 Aluminum and its alloys			supplier	wire	Silica, vitreous	60676-86-0		835.661	mg	250000	91229				
Encapsulation	M-011 Other inorganic materials	3342.644	mg	supplier	mold compound	Solid Epoxy Resin	proprietary		367.691	mg	110000	40141				
				supplier	mold compound	Phenol Resin	Proprietary		233.985	mg	70000	25544				
				supplier	mold compound	Metal Hydroxide	Proprietary		50.140	mg	15000	5474				
				supplier	mold compound	carbon black	1333-86-4		16.713	mg	5000	1825				
				supplier	solder	Tin (Sn)	7440-31-5		138.672	mg	964903	15139				
solder paste	Solder	143.716	mg	supplier	solder	Silver (Ag)	7440-22-4		5.030	mg	35000	549				
				SVHC	solder	Lead (Pb)	7439-92-1		0.014	mg	97	2				
				supplier	solder alloy	Tin (Sn)	7440-31-5		55.236	mg	1000000	6030				
connections coating	Solder	55.236	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		55.236	mg	1000000	6030				