



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 *	2018-03-26
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
STB10LN80K5	TLD2*VK83B52	A	3068	2018-03-26
	Amount	UoM	Unit type	ST ECOPACK Grade
	1380	mg	Each	ECOPACK2
	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	245	3		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
NA	Tin (Sn), matte	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
SIP	10.2-9.15-4.5	2	gull wing	
Comment	D2PAK			

QueryList : RoHS Directive 2011/65/EU-July 2011 – Annex II amended by Directive 2015/863-April 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 : California Prop65 list, dated 15th December 2017			
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	0.13	Die - Leadframe	93
Lead	6.70	Soft solder	4854

QueryList : REACH-15th January 2018				
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	TLD2*VK83852				6000000.0	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	5.530	mg	supplier	die	Silicon (Si)	7440-21-3		5.356	mg	968535	3881
				supplier	metallization	Aluminium (Al)	7429-90-5		0.070	mg	12658	51
				supplier	Passivation	Silicon Oxide	7631-86-9		0.031	mg	5606	22
				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.004	mg	724	3
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.051	mg	9222	36
				supplier	back side metallization	Silver (Ag)	7440-22-4		0.018	mg	3255	13
Leadframe	M-004 Copper and its alloys	778.633	mg	supplier	alloy	Copper (Cu)	7440-50-8		777.537	mg	998592	563433
				supplier	alloy	Iron (Fe)	7439-89-6		0.779	mg	1000	564
				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.234	mg	301	170
				supplier	metallization	Nickel (Ni)	7440-02-0		0.077	mg	99	56
				supplier	metallization	Phosphorus (P)	7723-14-0		0.006	mg	8	4
				supplier	JIG - R	solder	Lead (Pb)	7439-92-1	7a-Lead in high mel	6.698	mg	955083
Soft solder	Solder	7.013	mg	supplier	solder	Silver (Ag)	7440-22-4		0.175	mg	24954	127
				supplier	solder	Tin (Sn)	7440-31-5		0.140	mg	19963	101
				supplier	wire	Aluminium (Al)	7429-90-5		0.771	mg	996124	559
Bonding wires	M-003 Aluminum and its alloys	0.774	mg	supplier	wire	Magnesium (Mg)	7439-95-4		0.003	mg	3876	2
				supplier	wire	Silica, vitreous	60676-86-0		512.366	mg	875000	371280
Encapsulation	M-011 Other inorganic materials	585.561	mg	supplier	mold compound	Tetramethyl-biphenyl-diyl-bis oxymethylene-bi	EC 413-900-7		23.422	mg	40000	16972
				supplier	mold compound	Epoxy Resin	25068-38-6		17.567	mg	30000	12730
				supplier	mold compound	phenol resin	29690-82-2		29.278	mg	50000	21216
				supplier	mold compound	Carbon black	1333-86-4		2.928	mg	5000	2122
connections coating	Solder	2.489	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		2.489	mg	1000000	1804