



Materials Declaration Form

IPC Form Type *	1752 Distribute	Version	2
Sectionals *	Material Info Manufacturing Info	Subsectionals *	A-D * : Required Field

Supplier Information			
Company Name *	STMicroelectronics	Response Date *	2019-04-12
Company Unique ID	NL 008751171801		
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 *	Rossana Bonaccorso	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
STFU14N80K5	TS4L*VK84B52	A	3068	2019-04-12
Amount	UoM	Unit type	ST ECOPACK Grade	
1380	mg	Each	ECOPACK2	

Manufacturing information				
J-STD-020 MSL Rating	Classification Temp	Nbr of Reflow Cycles		 life.augmented
NA	NA	NA		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
NA	Tin (Sn), matte	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
SIP	102-16.5-4.5	3	Through-hole	
Comment	TO-220FP ULTRA NARROW LEADS			

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
5 - Product(s) is obsolete, no information is available	FALSE
6 - Product(s) is unknown, no information is available	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 23rd November 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	0.29	Die - Leadframe	207
Lead	9.41	Soft solder	6817

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	9.41	Soft solder	6817
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	9.41	Soft solder	955030

Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	TS4L*VK84852					
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	10.907	mg	supplier	die	Silicon (Si)	7440-21-3		10.474	mg	960301	7590
				supplier	metallization	Aluminium (Al)	7429-90-5		0.208	mg	19070	151
				supplier	Passivation	Silicon Nitride	12033-89-5		0.049	mg	4493	36
				supplier	Passivation	Silicon Oxide	7631-86-9		0.074	mg	6785	54
				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.005	mg	458	4
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.072	mg	6601	52
Leadframe	M-004 Copper and its alloys	583.699	mg	supplier	alloy	Silver (Ag)	7440-22-4		0.025	mg	2292	18
				supplier	alloy	Copper (Cu)	7440-50-8		582.709	mg	998304	422253
				supplier	alloy	Iron (Fe)	7439-89-6		0.584	mg	1001	423
				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.175	mg	300	127
				supplier	metallization	Nickel (Ni)	7440-02-0		0.214	mg	367	155
				supplier	metallization	Phosphorus (P)	7723-14-0		0.017	mg	28	12
Soft solder	Solder	9.851	mg	JIG - R	solder	Lead (Pb)	7439-92-1	7a-Lead in high mel	9.408	mg	955030	6817
				supplier	solder	Silver (Ag)	7440-22-4		0.246	mg	24972	178
				supplier	solder	Tin (Sn)	7440-31-5		0.197	mg	19998	143
Bonding wires	M-011 Other inorganic materials	0.783	mg	supplier	wire	Aluminium (Al)	7429-90-5		0.780	mg	996169	565
				supplier	wire	Magnesium (Mg)	7439-95-4		0.003	mg	3831	2
Encapsulation	M-011 Other inorganic materials	769.708	mg	supplier	mold compound	Quartz	14808-60-7		538.795	mg	699999	390431
				supplier	mold compound	Silica, vitreous	60676-86-0		57.728	mg	75000	41832
				supplier	mold compound	Epoxy resin	25068-38-6		107.759	mg	140000	78086
				supplier	mold compound	phenol resin	29690-82-2		53.880	mg	70001	39043
				supplier	mold compound	metal hydroxide	21645-51-2		7.697	mg	10000	5578
				supplier	mold compound	carbon black	1333-86-4		3.849	mg	5000	2789
connections coating	Solder	5.052	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		5.052	mg	1000000	3661