



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 *	2017-04-28
Contact Name *	Refer to Supplier Comment section		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
STF9N80K5	TSFP*VK82B52	A	3068	2017-04-28
Amount	UoM	Unit type	ST ECOPACK Grade	
1900.00	mg	Each	ECOPACK2	

Manufacturing information				
J-STD-020 MSL Rating	Classification Temp	Nbr of Reflow Cycles		
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	10.2-16.15-4.5	3	Through-hole	
Comment	TO 220 ISO FULL PACK IN LINE			

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)

Query : California Prop65 list, dated 27th January 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	0.72	die backside metal-leadframe metal	377
Lead	5.69	soft solder	2995

QueryList : REACH-12th January 2017				
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

Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	TSFP*VK82B52					
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)
Die	Other inorganic materials	4.833	mg	supplier	die	Silicon (Si)	7440-21-3		4.517	mg	934616	2377
				supplier	metallization	Aluminium (Al)	7429-90-5		0.118	mg	24415	62
				supplier	metallization	Copper (Cu)	7440-50-8		0.043	mg	8897	23
				supplier	Passivation	Silicon Nitride	12033-89-5		0.027	mg	5587	14
				supplier	Passivation	Silicon Oxide	7631-86-9		0.067	mg	13863	35
				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.003	mg	621	2
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.043	mg	8897	23
				supplier	back side metallization	Silver (Ag)	7440-22-4		0.015	mg	3104	8
Leadframe	Copper & its alloys	605.984	mg	supplier	alloy	Copper (Cu)	7440-50-8		604.650	mg	997799	318237
				supplier	alloy	CopperPhosphorous (CuP)	12517-41-8		0.605	mg	998	318
				supplier	metallization	Nickel (Ni)	7440-02-0		0.674	mg	1112	355
				supplier	metallization	Phosphorus (P)	12185-10-3		0.055	mg	91	29
Soft solder	Solder	5.959	mg	JIG - R	solder	Lead (Pb)	7439-92-1	7a-Lead in high mel	5.691	mg	955026	2995
				supplier	solder	Silver (Ag)	7440-22-4		0.149	mg	25004	79
				supplier	solder	Tin (Sn)	7440-31-5		0.119	mg	19970	63
Bonding wires	Other inorganic materials	0.932	mg	supplier	wire	Aluminium (Al)	7429-90-5		0.928	mg	995708	488
				supplier	wire	Magnesium (Mg)	7439-95-4		0.004	mg	4292	2
Encapsulation	Other Organic Materials	1276.426	mg	supplier	mold compound	Quartz	14808-60-7		893.498	mg	700000	470262
				supplier	mold compound	Silica, vitreous	60676-86-0		95.732	mg	75000	50385
				supplier	mold compound	Epoxy resin	25068-38-6		178.700	mg	140000	94053
				supplier	mold compound	phenol resin	29690-82-2		89.350	mg	70000	47026
				supplier	mold compound	metal hydroxide	21645-51-2		12.764	mg	10000	6718
				supplier	mold compound	carbon black	1333-86-4		6.382	mg	5000	3359
Connections coating	Solder	5.866	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		5.866	mg	1000000	3087