



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 *	2019-04-19
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
STF20N95K5	XSPF*VJLLB52	A	3068	2019-04-19
	Amount	UoM	Unit type	ST ECOPACK Grade
	1900.00	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
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-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 23rd November 2018			
Query			Response
1 - The product does not contain identified substance from California Prop 65 List, no exposure to consumers is foreseen			TRUE
2 - The product is containing below substance(s) from California Prop 65 List, no exposure to consumers is foreseen			FALSE
Substance	amount in product (mg)	Application	ppm in product
Nickel	0.83	Die - Leadframe	436
Lead	19.69	Soft solder	10364

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	19.691	Soft solder	10364
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	19.69	Soft solder	954993

Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	XSPF*VJLB52									
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	23.462	mg	supplier	die	Silicon (Si)	7440-21-3		22.547	mg	961001	11867				
				supplier	metallization	Aluminium (Al)	7429-90-5		0.439	mg	18711	231				
				supplier	Passivation	Silicon Nitride	12033-89-5		0.106	mg	4518	56				
				supplier	Passivation	Silicon Oxide	7631-86-9		0.151	mg	6435	79				
				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.011	mg	469	6				
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.154	mg	6564	81				
				supplier	back side metallization	Silver (Ag)	7440-22-4		0.054	mg	2302	28				
				supplier	alloy	Copper (Cu)	7440-50-8		604.468	mg	997498	318141				
Leadframe	M-004 Copper and its alloys	605.984	mg	supplier	alloy	Iron (Fe)	7439-89-6		0.605	mg	998	318				
				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.182	mg	300	96				
				supplier	metallization	Nickel (Ni)	7440-02-0		0.674	mg	1112	355				
				supplier	metallization	Phosphorus (P)	7723-14-0		0.055	mg	92	30				
				Soft solder	Solder	20.619	mg	JIG - R	solder	Lead (Pb)	7439-92-1	7a-Lead in high mel	19.691	mg	954993	10364
				supplier	solder	Silver (Ag)	7440-22-4		0.516	mg	25025	272				
supplier	solder	Tin (Sn)	7440-31-5		0.412	mg	19982	217								
Bonding wires	M-011 Other inorganic materials	1.084	mg	supplier	wire	Aluminium (Al)	7429-90-5		1.080	mg	996310	568				
				supplier	wire	Magnesium (Mg)	7439-95-4		0.004	mg	3690	2				
				Encapsulation	M-011 Other inorganic materials	1242.985	mg	supplier	mold compound	Quartz	14808-60-7		870.089	mg	700000	457942
supplier	mold compound	Silica, vitreous	60676-86-0		93.224	mg	75000	49065								
supplier	mold compound	Epoxy resin	25068-38-6		174.018	mg	140000	91588								
supplier	mold compound	phenol resin	29690-82-2		87.009	mg	70000	45794								
supplier	mold compound	metal hydroxide	21645-51-2		12.430	mg	10000	6542								
supplier	mold compound	carbon black	1333-86-4		6.215	mg	5000	3271								
Connections coating	Solder	5.866	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		5.866	mg	1000000	3087				