



Materials Declaration Form

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

*: Required Field

Supplier Information			
Company Name *	STMicroelectronics	Response Date *	2018-08-24
Contact Name *	Refer to Supplier Comment section	Contact Email *	Refer to Supplier Comment section
Contact Phone *	Refer to Supplier Comment section	Authorized Representative *	Giovanni Giacobello
Authorized Representative *	Giovanni Giacobello	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		


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Legal Statement

Supplier Acceptance *	true	Legal Declaration *	Standard
Legal Statement	<p>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.</p>		

Product				
Mfr Item Number	Mfr Item Name	Version	Mfr Site	Date
STF100N10F7	TSFP*OD0FB82	A	3068	2018-08-24
	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 25th May 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	0.74	Die - Leadframe	391
Lead	6.13	Soft solder	3226

QueryList : REACH-27th June 2018				
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	6.13	Soft solder	3226
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	6.13	Soft solder	954977

Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	TSFP*OD0F882					
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	5.172	mg	supplier	die	Silicon (Si)	7440-21-3		4.882	mg	943929	2569
				supplier	metallization	Aluminium (Al)	7429-90-5		0.113	mg	21848	59
				supplier	metallization	Nickel (Ni)	7440-02-0		0.028	mg	5413	15
				supplier	metallization	Silver (Ag)	7440-22-4		0.017	mg	3287	9
				supplier	metallization	Titanium (Ti)	7440-32-6		0.013	mg	2514	7
				supplier	metallization	Tungsten (W)	7440-33-7		0.028	mg	5414	15
				supplier	Passivation	Silicon Oxide	7631-86-9		0.028	mg	5414	15
				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.003	mg	580	2
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.040	mg	7734	21
				supplier	back side metallization	Vanadium (V)	7440-62-2		0.003	mg	580	2
Leadframe	M-004 Copper and its alloys	605.985	mg	supplier	back side metallization	Silver (Ag)	7440-22-4		0.017	mg	3287	9
				supplier	alloy	Copper (Cu)	7440-50-8		604.469	mg	997498	318142
				supplier	alloy	Iron (Fe)	7439-89-6		0.605	mg	999	318
				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.182	mg	300	95
				supplier	metallization	Nickel (Ni)	7440-02-0		0.674	mg	1112	355
Soft solder	Solder	6.419	mg	JIG - R	solder	Lead (Pb)	7439-92-1	7a-Lead in high mel	6.130	mg	954977	3226
				supplier	solder	Silver (Ag)	7440-22-4		0.161	mg	25082	85
				supplier	solder	Tin (Sn)	7440-31-5		0.128	mg	19941	67
				supplier	wire	Aluminium (Al)	7429-90-5		2.050	mg	995629	1079
Bonding wires	M-011 Other inorganic materials	2.059	mg	supplier	wire	Magnesium (Mg)	7439-95-4		0.009	mg	4371	5
				supplier	wire							
Encapsulation	M-011 Other inorganic materials	1274.499	mg	supplier	mold compound	Quartz	14808-60-7		892.149	mg	700000	469552
				supplier	mold compound	Silica, vitreous	60676-86-0		95.587	mg	75000	50309
				supplier	mold compound	Epoxy resin	25068-38-6		178.430	mg	140000	93911
				supplier	mold compound	phenol resin	29690-82-2		89.215	mg	70000	46955
				supplier	mold compound	metal hydroxide	21645-51-2		12.745	mg	10000	6708
				supplier	mold compound	carbon black	1333-86-4		6.373	mg	5000	3354
Connections coating	Solder	5.866	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		5.866	mg	1000000	3087