



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 *	2018-07-27
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
STGF10H60DF	XDFP*E163R52	A	3068	2018-07-27
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	0.72	Die- Leadframe	377
Lead	3.84	Soft solder	2019

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	3.84	Soft solder	2019
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	3.84	Soft solder	955190

Material Composition Declaration :						Mfr Item Name		XDFP*E163R52					
note : Substance present with less 0.001mg will not be declared in this document													
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)	
Dies	M-011 Other inorganic materials	4.912	mg	supplier	die	Silicon (Si)	7440-21-3		4.615	mg	939498	2429	
				supplier	metallization	Aluminium (Al)	7429-90-5		0.089	mg	18118	47	
				supplier	Passivation	Silicon Nitride	12033-89-5		0.021	mg	4275	11	
				supplier	Passivation	Silicon Oxide	7631-86-9		0.040	mg	8143	21	
				supplier	back side metallization	Aluminium (Al)	7429-90-5		0.012	mg	2443	6	
				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.004	mg	814	2	
				supplier	back side metallization	Gold (Au)	7440-57-5		0.003	mg	611	2	
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.042	mg	8550	22	
				supplier	back side metallization	Vanadium (V)	7440-62-2		0.002	mg	407	1	
				supplier	back side metallization	Silver (Ag)	7440-22-4		0.008	mg	1629	4	
Leadframe	M-004 Copper and its alloys	605.984	mg	supplier	polymer die coating	Propimide	Proprietary		0.076	mg	15512	40	
				supplier	alloy	Copper (Cu)	7440-50-8		604.468	mg	997498	318141	
				supplier	alloy	Iron (Fe)	7439-89-6		0.605	mg	999	319	
				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	
Soft solder	Solder	4.017	mg	SVHC	metallization	Phosphorus (P)	7723-14-0		0.055	mg	91	29	
				supplier	solder	Lead (Pb)	7439-92-1	7a-Lead in high mel	3.837	mg	955190	2019	
				supplier	solder	Silver (Ag)	7440-22-4		0.100	mg	24894	53	
				supplier	solder	Tin (Sn)	7440-31-5		0.080	mg	19915	42	
Bonding wires	M-011 Other inorganic materials	2.059	mg	supplier	wire	Aluminium (Al)	7429-90-5		2.050	mg	995629	1079	
				supplier	wire	Magnesium (Mg)	7439-95-4		0.009	mg	4372	5	
Encapsulation	M-011 Other inorganic materials	1277.162	mg	supplier	mold compound	Quartz	14808-60-7		894.013	mg	700000	470533	
				supplier	mold compound	Silica, vitreous	60676-86-0		95.787	mg	75000	50414	
				supplier	mold compound	Epoxy resin	25068-38-6		178.803	mg	140000	94107	
				supplier	mold compound	phenol resin	29690-82-2		89.401	mg	70000	47053	
				supplier	mold compound	metal hydroxide	21645-51-2		12.772	mg	10000	6722	
Connections coating	Solder	5.866	mg	supplier	mold compound	carbon black	1333-86-4		6.386	mg	5000	3361	
				supplier	solder alloy	Tin (Sn)	7440-31-5		5.866	mg	1000000	3087	