



## Materials Declaration Form

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

Supplier Information			
<b>Company Name *</b>	STMicroelectronics	<b>Response Date *</b>	2018-10-19
<b>Company Unique ID</b>	NL 008751171801		
<b>Contact Name *</b>	Refer to Supplier Comment section		Refer to Supplier Comment section
<b>Contact Phone *</b>	Refer to Supplier Comment section	<b>Contact Email *</b>	Refer to Supplier Comment section
<b>Authorized Representative *</b>	Rossana Bonaccorso	<b>Representative Title</b>	ADG MD Champion
<b>Representative Phone *</b>	Refer to Supplier Comment section	<b>Representative Email *</b>	Refer to Supplier Comment section
<b>Supplier Comment</b>	Online Technical Support - STMicroelectronics : <a href="http://www.st.com/web/en/support/support.html">http://www.st.com/web/en/support/support.html</a>		

**Uncertainty Statement**


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Legal Statement		
<b>Supplier Acceptance *</b>	true	<b>Legal Declaration *</b>
		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
SMA4F28A	8HC5*SFU033C	A	64BA	2018-10-19
	Amount	UoM	Unit type	ST ECOPACK Grade
	39.00	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
1	260	3		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
NA	Tin (Sn), matte	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
CHP	4.14-2.76-1.94	2	Flat	
Comment	SMA Flat 2 Leads No exposed pad			

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	0.01	Die	308
Lead	1.03	Soft solder	26410

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	1.03	Soft solder	26410
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	1.03	Soft solder	924596

Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	8HCS*SFU033C					
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	0.909	mg	supplier	die	Silicon (Si)	7440-21-3		0.874	mg	961496	22410
				supplier	metallization	Aluminium (Al)	7429-90-5		0.006	mg	6601	155
				supplier	metallization	Gold (Au)	7440-57-5		0.005	mg	5501	128
				supplier	metallization	Nickel (Ni)	7440-02-0		0.005	mg	5501	128
				supplier	Passivation	Silicon Oxide	7631-86-9		0.006	mg	6601	154
				supplier	back side metallization	Aluminium (Al)	7429-90-5		0.004	mg	4400	103
				supplier	back side metallization	Gold (Au)	7440-57-5		0.002	mg	2200	51
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.007	mg	7700	179
				Leadframe	M-004 Copper and its alloys	12.816	mg	supplier	alloy	Copper (Cu)	7440-50-8	
supplier	alloy	Iron (Fe)	7439-89-6						0.013	mg	1014	333
supplier	alloy	Iron Phosphide (FeP)	26508-33-8						0.004	mg	312	103
Soft solder	Solder	1.114	mg	JIG - R	solder	Lead (Pb)	7439-92-1	7a-Lead in high mel	1.030	mg	924596	26410
				supplier	solder	Tin (Sn)	7440-31-5		0.028	mg	25135	718
				supplier	solder	Silver (Ag)	7440-22-4		0.056	mg	50269	1436
Encapsulation	M-011 Other inorganic materials	20.973	mg	supplier	mold compound	Amorphous Silica	7631-86-9		18.561	mg	884995	475923
				supplier	mold compound	Epoxy resin	29690-82-2		1.258	mg	59982	32256
				supplier	mold compound	Phenol resin	9003-35-4		0.944	mg	45009	24205
				supplier	mold compound	Carbon black	1333-86-4		0.084	mg	4005	2154
				supplier	mold compound	Magnesium oxide	1309-48-4		0.042	mg	2003	1077
				supplier	mold compound	Aluminium hydroxide	21645-51-2		0.042	mg	2003	1077
				supplier	mold compound	Mercaptopropyl trimethoxysilane	4420-74-0		0.042	mg	2003	1077
Connections coating	Solder	0.020	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		0.020	mg	1000000	513
Clip	M-004 Copper and its alloys	3.168	mg	supplier	alloy	Copper (Cu)	7440-50-8		3.165	mg	999053	81154
				supplier	alloy	CopperPhosphorous (CuP)	12517-41-8		0.003	mg	947	77