



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 *	2020-07-06
Company Unique ID	NL 008751171B01		
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
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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
SMA4F70A	8HC5*TFU082D	A	64BA	2020-07-06
	Amount	UoM	Unit type	ST ECOPACK Grade
	39	mg	Each	ECOPACK 2
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	
Not Applicable	Tin (Sn), matte, annealed	Copper Alloy	DM00451316	

Package Designator	Size	Nbr of instances	Shape	
CHP	4.20,2.80,0.98	2	Flat	
Comment	SMA Flat 2 Leads No exposed pad. MDF valid for CPs: SMA4F70A,SMA6F70A			

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 3rd January 2020			
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	0.02	die	436
Lead	0.78	soft solder	20051

QueryList : REACH-16th January 2020				
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	0.78	Soft solder	20051
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	0.782	Soft solder	921084

Material Composition Declaration :						Mfr Item Name	8HC5*TFU082D					
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)
Die	M-011 Other inorganic materials	1.336	mg	supplier	die	Silicon(Si)	7440-21-3		1.258	mg	941615	32257
				supplier	metallisation	Aluminium(Al)	7429-90-5		0.015	mg	11228	385
				supplier	metallisation	Gold(Au)	7440-57-5		0.009	mg	6737	231
				supplier	metallisation	Nicke(Ni)	7440-02-0		0.017	mg	12725	436
				supplier	passivation	Silicon oxide	7631-86-9		0.009	mg	6737	231
				supplier	polymer coating	Durimide	proprietary		0.028	mg	20958	718
Leadframe	M-004 Copper and its alloys	15.130	mg	supplier	alloy & coating	Copper(Cu)	7440-50-8		15.110	mg	998678	387436
				supplier	alloy & coating	Iron(Fe)	7439-89-6		0.007	mg	463	179
				supplier	alloy & coating	Iron Phosphide(FeP)	26508-33-8		0.013	mg	859	333
Soft solder	Solder	0.849	mg	SVHC	solder	Lead(Pb)	7439-92-1	7a-Lead in high melting temper	0.782	mg	921084	20051
				supplier	solder	Tin(Sn)	7440-31-5		0.042	mg	49470	1077
				supplier	solder	Silver(Ag)	7440-22-4		0.021	mg	24735	538
				supplier	solder	dry flux residue	proprietary		0.004	mg	4711	103
Encapsulation	M-011 Other inorganic materials	18.862	mg	supplier	mold compound	Amorphous silica	7631-86-9		16.692	mg	884953	428000
				supplier	mold compound	Epoxy Cresol Novolac	29690-82-2		1.132	mg	60015	29026
				supplier	mold compound	Phenolic resin	9003-35-4		0.849	mg	45011	21769
				supplier	mold compound	Carbon black	1333-86-4		0.075	mg	3976	1923
				supplier	mold compound	Magnesium oxide	1309-48-4		0.038	mg	2015	974
				supplier	mold compound	Aluminium hydroxide	21645-51-2		0.038	mg	2015	974
connections coating	Solder	0.153	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		0.153	mg	1000000	3923
				supplier	alloy	Copper(Cu)	7440-50-8		2.669	mg	999625	68436
Clip		2.670	mg	supplier	alloy	Copper Posphorous	12517-41-8		0.001	mg	375	26
				supplier	alloy	Copper Posphorous	12517-41-8		0.001	mg	375	26