



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 *	2020-06-05
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 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		

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
SM4T21AY	AHSR*TYU021C	A	ZA41	2020-06-05
	Amount	UoM	Unit type	ST ECOPACK Grade
	70	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		
1	260	3		
Bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
Not Applicable	Tin (Sn), matte	Copper Alloy		


 life.augmented

Package Designator	Size	Nbr of instances	Shape	
SOJ	4.3-2.77-2	2	j bend	
Comment	SMA			

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	0.01	Die	171
Lead	2.64	Soft solder	37643

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	2.64	Soft solder	37643
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	2.64	Soft solder	925211

Material Composition Declaration :						Mfr Item Name	AHSR*TYU021C					
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	1.127	mg	supplier	die	Silicon (Si)	7440-21-3		1.092	mg	968944	15600
				supplier	metallization	Aluminium (Al)	7429-90-5		0.006	mg	5324	86
				supplier	metallization	Gold (Au)	7440-57-5		0.005	mg	4437	71
				supplier	passivation	Nickel (Ni)	7440-02-0		0.005	mg	4437	71
				supplier	Passivation	Silicon Oxide	7631-86-9		0.006	mg	5324	86
				supplier	back side metallization	Aluminium (Al)	7429-90-5		0.004	mg	3548	57
				supplier	back side metallization	Gold (Au)	7440-57-5		0.002	mg	1775	29
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.007	mg	6211	100
Leadframe & Clip	M-004 Copper and its alloys	26.886	mg	supplier	alloy	Copper (Cu)	7440-50-8		26.873	mg	999516	383900
				supplier	alloy	Zinc (Zn)	7440-66-6		0.001	mg	37	14
				supplier	alloy	Iron (Fe)	7439-89-6		0.003	mg	112	43
				supplier	alloy	Phosphorus (P)	7723-14-0		0.009	mg	335	129
Die attach	Solder	2.848	mg	supplier	soft solder	Lead (Pb)	7439-92-1	7a-Lead in high me	2.635	mg	925211	37643
				supplier	soft solder	Tin (Sn)	7440-31-5		0.142	mg	49860	2029
				supplier	soft solder	Silver (Ag)	7440-22-4		0.071	mg	24929	1013
Encapsulation	M-015 Other organic materials	38.498	mg	supplier	mold compound	Amorphous silica	7631-86-9		26.449	mg	687023	377843
				supplier	mold compound	Quartz	14808-60-7		9.624	mg	249987	137486
				supplier	mold compound	Phenol resin	9003-35-4		2.310	mg	60003	33000
				supplier	mold compound	carbon black	1333-86-4		0.115	mg	2987	1643
Connection coating	Solder	0.641	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		0.641	mg	1000000	9157