



## Materials Declaration Form

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

Supplier Information			
<b>Company Name *</b>	STMicroelectronics	<b>Response Date *</b>	2017-11-22
<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>	Giovanni Giacobello	<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
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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
STPSC10TH13TI	HSVZ*3K091T6	A	SH1A	2017-11-22
	Amount	UoM	Unit type	ST ECOPACK Grade
	1900	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
Not Applicable	Not Applicable	Not Applicable		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
Not Applicable	Tin (Sn), matte, annealed	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
SIP	10 - 15.5 - 4.5	3	Through-hole	
Comment	Package: TO 220 (CB415) ISOL.			

QueryList : RoHS Directive 2011/65/EU-July 2011 – Annex II amended by Directive 2015/863-April 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 : California Prop65 list, dated 7th July 2017			
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	1.11	Die	582
Lead	4.34	Soft solder	2286

QueryList : REACH-7th July 2017				
Query				Response
1 - Product(s) does not contain REACH Substances Of Very High Concern above the limits per the definition within REACH				true
CategoryLevel_Name	CategoryLevel_Threshold	amount in product (mg)	Application	ppm in product

Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	HSVZ*3K09116				8000000.0	1000001.0
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	3.806	mg	supplier	die	Silicium carbide	409-21-2		3.686	mg	968471	1940
				supplier	metallization	Aluminium (Al)	7429-90-5		0.024	mg	6306	13
				supplier	metallization	Gold (Au)	7440-57-5		0.004	mg	1051	2
				supplier	passivation	Nickel (Ni)	7440-02-0		0.019	mg	4992	10
				supplier	metallization	Silver (Ag)	7440-22-4		0.041	mg	10772	22
				supplier	metallization	Titanium (Ti)	7440-32-6		0.001	mg	263	1
				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.001	mg	263	1
				supplier	back side metallization	Gold (Au)	7440-57-5		0.004	mg	1051	2
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.016	mg	4204	8
				supplier	polymer die coating	PIX1 Gamma-butyrolactone	96-48-0		0.010	mg	2627	5
Leadframe	M-004 Copper and its alloys	1614.847	mg	supplier	alloy	Copper (Cu)	7440-50-8		1614.103	mg	999539	849528
				supplier	alloy	Iron (Fe)	7439-89-6		0.744	mg	461	392
				supplier	solder	Lead (Pb)	7439-92-1	7a-Lead in high me	2.340	mg	934878	1232
Soft solder	Solder	2.503	mg	JIG - R	solder	Tin (Sn)	7440-31-5		0.125	mg	49940	66
				supplier	solder	Silver (Ag)	7440-22-4		0.038	mg	15182	20
				supplier	solder	Lead (Pb)	7439-92-1	7a-Lead in high me	2.004	mg	849873	1055
Soft solder 2	Solder	2.358	mg	JIG - R	solder	Antimony (Sb)	7440-36-0		0.236	mg	100085	124
				supplier	solder	Tin (Sn)	7440-31-5		0.118	mg	50042	62
				supplier	wire	Aluminium (Al)	7429-90-5		3.386	mg	1000000	1782
Encapsulation	M-011 Other inorganic materials	177.586	mg	supplier	mold compound	Silica, vitreous	60676-86-0		134.965	mg	759998	71034
				supplier	mold compound	Epoxy Cresol Novolak	29690-82-2		18.114	mg	102001	9534
				supplier	mold compound	Phenol resin	9003-35-4		10.655	mg	59999	5608
				supplier	mold compound	Others	Proprietary		8.879	mg	49998	4673
				supplier	mold compound	Metal hydroxide	Proprietary		3.552	mg	20002	1869
				supplier	mold compound	Carbon black	1333-86-4		1.421	mg	8002	748
connections coating	Solder	6.314	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		6.314	mg	1000000	3323
Subelement	M-011 Other inorganic materials	89.200	mg	supplier	ceramic	Alumina (Al2O3)	1344-28-1		79.745	mg	894002	41971
				supplier	ceramic	Molybdenum oxide	1313-27-5		4.460	mg	50000	2347
				supplier	metallization	Nickel (Ni)	7440-02-0		1.070	mg	11996	563
				supplier	metallization	Phosphorus (P)	12185-10-3		0.080	mg	897	42
				supplier	metallization	Manganese (Mn)	1344-28-1		3.479	mg	39002	1831
				supplier	0	Titanium (Ti)	7440-32-6		0.366	mg	4103	193