



## 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 Giacopello	<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
STPSC8TH13TI	HSVZ*3K131T6	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	1.10	Die	579
Lead	3.64	Soft solder	1915

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*3K13116					
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	3.128	mg	supplier	die	Silicium carbide	409-21-2		3.028	mg	968031	1594
				supplier	metallization	Aluminium (Al)	7429-90-5		0.020	mg	6394	11
				supplier	metallization	Gold (Au)	7440-57-5		0.003	mg	959	2
				supplier	passivation	Nickel (Ni)	7440-02-0		0.016	mg	5115	8
				supplier	metallization	Silver (Ag)	7440-22-4		0.033	mg	10550	17
				supplier	metallization	Titanium (Ti)	7440-32-6		0.001	mg	320	1
				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.001	mg	320	1
				supplier	back side metallization	Gold (Au)	7440-57-5		0.003	mg	959	2
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.014	mg	4476	7
				supplier	polymer die coating	PIX1 Gamma-butyrolactone	96-48-0		0.009	mg	2876	5
Leadframe	M-004 Copper and its alloys	1616.086	mg	supplier	alloy	Copper (Cu)	7440-50-8		1615.342	mg	999540	850180
				supplier	alloy	Iron (Fe)	7439-89-6		0.744	mg	460	390
				supplier	alloy	Lead (Pb)	7439-92-1	7a-Lead in high me	1.960	mg	935115	1032
Soft solder	Solder	2.096	mg	JIG - R	solder	Lead (Pb)	7439-92-1	7a-Lead in high me	1.960	mg	935115	1032
				supplier	solder	Tin (Sn)	7440-31-5		0.105	mg	50095	55
Soft solder 2	Solder	1.974	mg	supplier	solder	Silver (Ag)	7440-22-4		0.031	mg	14790	16
				JIG - R	solder	Lead (Pb)	7439-92-1	7a-Lead in high me	1.678	mg	850051	883
				supplier	solder	Antimony (Sb)	7440-36-0		0.197	mg	99797	104
				supplier	solder	Tin (Sn)	7440-31-5		0.099	mg	50152	52
Encapsulation	M-011 Other inorganic materials	177.754	mg	supplier	wire	Aluminium (Al)	7429-90-5		3.448	mg	1000000	1815
				supplier	mold compound	Silica, vitreous	60676-86-0		135.093	mg	760000	71102
				supplier	mold compound	Epoxy Cresol Novolak	29690-82-2		18.131	mg	102001	9543
				supplier	mold compound	Phenol resin	9003-35-4		10.665	mg	59999	5613
				supplier	mold compound	Others	Proprietary		8.888	mg	50000	4678
				supplier	mold compound	Metal hydroxide	Proprietary		3.555	mg	20000	1871
connections coating	Solder	6.314	mg	supplier	mold compound	Carbon black	1333-86-4		1.422	mg	8000	748
				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