



## Materials Declaration Form

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

Supplier Information			
<b>Company Name *</b>	<b>STMicroelectronics</b>	<b>Response Date *</b>	<b>2018-01-26</b>
<b>Contact Name *</b>	Refer to Supplier Comment section		Refer to Supplier Comment section
<b>Contact Phone *</b>	Refer to Supplier Comment section		Refer to Supplier Comment section
<b>Authorized Representative *</b>	Giovanni Giacobello	<b>Contact Email *</b>	Refer to Supplier Comment section
		<b>Representative Title</b>	ADG MD Champion
<b>Representative Phone *</b>	Refer to Supplier Comment section		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**

While STMicroelectronics has endeavored to provide information which is accurate and up to date, this document and its contents are provided on a strict 'as is' and 'as available' basis. STMicroelectronics disclaims all warranties, express or implied related to this document and its contents, including but not limited to implied warranties of completeness, truth, accuracy, merchantability, fitness for a particular purpose and non-infringement. ST shall have no responsibility and assumes no liability for any cost, loss or damage of any kind which could arise, directly or indirectly, from the use or inability to use this document and/or its contents.


**Legal Statement**

<b>Supplier Acceptance *</b>	<b>true</b>	<b>Legal Declaration *</b>	<b>Standard</b>
------------------------------	-------------	----------------------------	-----------------

**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
STPSC5H12D	HSDK*HC051T7	A	3068	2018-01-26
	Amount	UoM	Unit type	ST ECOPACK Grade
	1870	mg	Each	ECOPACK2

Manufacturing information				
J-STD-020 MSL Rating	Classification Temp	Nbr of Reflow Cycles		 life.augmented
NA	NA	NA		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
NA	Tin (Sn), matte	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape
SIP	10.2-16.25-4.5	2	Through-hole
Comment	DO 220		

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 15th December 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	0.13	Die / Leadframe	70
Lead	2.45	Soft solder	1308

QueryList : REACH-15th January 2018				
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
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				true
CategoryLevel_Name	CategoryLevel_Threshold	Amount in Embedded Article / Homogeneous Material (mg)	Application - Article / Homogeneous Material	ppm in Article /Homogeneous Material

Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	HSDK*HC051T7					
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	2.447	mg	supplier	die	Silicium carbide	409-21-2		2.316	mg	946465	1239
				supplier	metallization	Aluminium (Al)	7429-90-5		0.026	mg	10625	14
				supplier	metallization	Gold (Au)	7440-57-5		0.004	mg	1635	2
				supplier	metallization	Nickel (Ni)	7440-02-0		0.021	mg	8582	11
				supplier	metallization	Silver (Ag)	7440-22-4		0.044	mg	17981	24
				supplier	metallization	Titanium (Ti)	7440-32-6		0.002	mg	817	1
				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.001	mg	409	1
				supplier	back side metallization	Gold (Au)	7440-57-5		0.004	mg	1635	2
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.018	mg	7356	10
				supplier	polymer die coating	PIX1 Gamma-butyrolactone	96-48-0		0.011	mg	4495	6
Leadframe	M-004 Copper and its alloys	1184.408	mg	supplier	alloy	Copper (Cu)	7440-50-8		1182.770	mg	998617	632497
				supplier	alloy	Iron (Fe)	7439-89-6		1.184	mg	1000	631
				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.355	mg	300	190
				supplier	metallization	Nickel (Ni)	7440-02-0		0.092	mg	77	49
				supplier	metallization	Phosphorus (P)	7723-14-0		0.007	mg	6	4
Soft solder	Solder	2.561	mg	JIG - R	solder	Lead (Pb)	7439-92-1	7a-Lead in high mel	2.446	mg	955096	1308
				supplier	solder	Silver (Ag)	7440-22-4		0.064	mg	24990	34
				supplier	solder	Tin (Sn)	7440-31-5		0.051	mg	19914	27
Bonding wires	M-011 Other inorganic materials	1.385	mg	supplier	wire	Aluminium (Al)	7429-90-5		1.385	mg	1000000	741
Encapsulation	M-011 Other inorganic materials	674.958	mg	supplier	mold compound	Silica, vitreous	60676-86-0		587.213	mg	869999	314018
				supplier	mold compound	Epoxy resin	25068-38-6		67.496	mg	100000	36094
				supplier	mold compound	Phenol resin	29690-82-2		16.874	mg	25000	9024
				supplier	mold compound	Carbon Black	1333-86-4		3.375	mg	5001	1805
Connections coating	Solder	4.241	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		4.241	mg	1000000	2268