



Materials Declaration Form

IPC Form Type *	1752 Distribute	Version	2
Sectionals *	Material Info Manufacturing Info	Subsectionals *	A-D * : Required Field

Supplier Information			
Company Name *	STMicroelectronics	Response Date *	2018-01-26
Contact Name *	Refer to Supplier Comment section	Contact Email *	Refer to Supplier Comment section
Contact Phone *	Refer to Supplier Comment section	Authorized Representative *	Giovanni Giacobello
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
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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
STPSC20H12D	HSDK*HC021T7	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	0.22	Die / Leadframe	115
Lead	7.39	Soft solder	3952

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*HC02177				6000000.0	1000000.0
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	7.821	mg	supplier	die	Silicium carbide	409-21-2		7.405	mg	946810	3960
				supplier	metallization	Aluminium (Al)	7429-90-5		0.083	mg	10612	44
				supplier	metallization	Gold (Au)	7440-57-5		0.012	mg	1536	6
				supplier	metallization	Nickel (Ni)	7440-02-0		0.066	mg	8439	35
				supplier	metallization	Silver (Ag)	7440-22-4		0.141	mg	18028	75
				supplier	metallization	Titanium (Ti)	7440-32-6		0.005	mg	639	3
				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.004	mg	511	2
				supplier	back side metallization	Gold (Au)	7440-57-5		0.012	mg	1534	6
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.057	mg	7288	30
				supplier	polymer die coating	PIX1 Gamma-butyrolactone	96-48-0		0.036	mg	4603	22
Leadframe	M-004 Copper and its alloys	1184.409	mg	supplier	alloy	Copper (Cu)	7440-50-8		1182.771	mg	998617	632498
				supplier	alloy	Iron (Fe)	7439-89-6		1.184	mg	1000	633
				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	7.739	mg	JIG - R	solder	Lead (Pb)	7439-92-1	7a-Lead in high mel	7.390	mg	954904	3952
				supplier	solder	Silver (Ag)	7440-22-4		0.194	mg	25068	104
				supplier	solder	Tin (Sn)	7440-31-5		0.155	mg	20028	83
Bonding wires	M-011 Other inorganic materials	4.156	mg	supplier	wire	Aluminium (Al)	7429-90-5		4.156	mg	1000000	2222
Encapsulation	M-011 Other inorganic materials	661.634	mg	supplier	mold compound	Silica, vitreous	60676-86-0		575.622	mg	870001	307819
				supplier	mold compound	Epoxy resin	25068-38-6		66.163	mg	99999	35381
				supplier	mold compound	Phenol resin	29690-82-2		16.541	mg	25000	8845
				supplier	mold compound	Carbon Black	1333-86-4		3.308	mg	5000	1769
Connections coating	Solder	4.241	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		4.241	mg	1000000	2268