



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 *	2019-01-18
Company Unique ID	NL 008751171801		
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 *	Rossana Bonaccorso	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
STTH20R04D	HSDK*196L11J	A	3068	2019-01-18
Amount	UoM	Unit type	ST ECOPACK Grade	
1870.00	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	
NA	NA	NA		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy		
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-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 26th October 2018			
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	0.14	Die - Leadframe	73
Lead	5.42	Soft solder	2900

QueryList : REACH-15th January 2019				
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	5.42	Soft solder	2900
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	5.42	Soft solder	954922

Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	HSDK*196L1J					
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	6.216	mg	supplier	die	Silicon (Si)	7440-21-3		5.872	mg	944720	3140
				supplier	metallization	Aluminium (Al)	7429-90-5		0.073	mg	11745	39
				supplier	Passivation	Silicon Oxide	7631-86-9		0.024	mg	3860	13
				supplier	back side metallization	Aluminium (Al)	7429-90-5		0.045	mg	7240	24
				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.045	mg	7240	24
				supplier	back side metallization	Gold (Au)	7440-57-5		0.045	mg	7240	24
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.045	mg	7240	24
				supplier	polymer die coating	Propimide	Proprietary		0.067	mg	10715	36
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	5.679	mg	SVHC	solder	Lead (Pb)	7439-92-1	7a-Lead in high mel	5.423	mg	954922	2900
				supplier	solder	Silver (Ag)	7440-22-4		0.142	mg	25004	76
				supplier	solder	Tin (Sn)	7440-31-5		0.114	mg	20074	61
Bonding wires	M-011 Other inorganic materials	4.925	mg	supplier	wire	Aluminium (Al)	7429-90-5		4.925	mg	1000000	2634
				supplier	wire	Aluminium (Al)	7429-90-5		4.925	mg	1000000	2634
Encapsulation	M-011 Other inorganic materials	664.530	mg	supplier	mold compound	Silica, vitreous	60676-86-0		578.141	mg	870000	309166
				supplier	mold compound	Epoxy resin	25068-38-6		66.453	mg	100000	35536
				supplier	mold compound	Phenol resin	29690-82-2		16.613	mg	25000	8884
				supplier	mold compound	Carbon Black	1333-86-4		3.323	mg	5000	1777
Connections coating	Solder	4.241	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		4.241	mg	1000000	2268