



Materials Declaration Form

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

*: Required Field

Supplier Information			
Company Name *	STMicroelectronics	Response Date *	2018-01-29
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

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

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
STH170N8F7-2	R1(9*OD8HB52	A	3068	2018-01-29
Amount	UoM	Unit type	ST ECOPACK Grade	
1380	mg	Each	ECOPACK1	

Manufacturing information				
J-STD-020 MSL Rating	Classification Temp	Nbr of Reflow Cycles		
1	245	3		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
NA	Tin (Sn), matte	Copper Alloy		



Package Designator	Size	Nbr of instances	Shape	
SIP	10.2-7.2-4.5	3	GULL WING	
Comment	H2PAK HC 2-3 Leads			

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	0.34	Die / Leadframe	245
Lead	10.91	Soft solder	7904
Antimony trioxide	5.98	Mold compound	4333

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	R1(9*OD8H852					
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	9.410	mg	supplier	die	Silicon (Si)	7440-21-3		8.882	mg	943889	6436
				supplier	metallization	Aluminium (Al)	7429-90-5		0.206	mg	21892	149
				supplier	metallization	Nickel (Ni)	7440-02-0		0.051	mg	5420	37
				supplier	metallization	Silver (Ag)	7440-22-4		0.030	mg	3188	22
				supplier	metallization	Titanium (Ti)	7440-32-6		0.023	mg	2444	17
				supplier	metallization	Tungsten (W)	7440-33-7		0.052	mg	5526	38
				supplier	Passivation	Silicon Oxide	7631-86-9		0.051	mg	5420	37
				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.006	mg	637	4
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.073	mg	7758	53
				supplier	back side metallization	Vanadium (V)	7440-62-2		0.006	mg	638	4
				supplier	back side metallization	Silver (Ag)	7440-22-4		0.030	mg	3188	22
				supplier	alloy	Copper (Cu)	7440-50-8		846.676	mg	998428	613533
				supplier	alloy	Iron (Fe)	7439-89-6		0.848	mg	1000	616
Leadframe	M-004 Copper and its alloys	848.009	mg	supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.254	mg	300	184
				supplier	metallization	Nickel (Ni)	7440-02-0		0.214	mg	252	155
				supplier	metallization	Phosphorus (P)	7723-14-0		0.017	mg	20	12
				supplier	solder	Lead (Pb)	7439-92-1	7a-Lead in high mel	10.907	mg	954995	7904
				supplier	solder	Silver (Ag)	7440-22-4		0.286	mg	25042	207
				supplier	solder	Tin (Sn)	7440-31-5		0.228	mg	19963	165
Soft solder	Solder	11.421	mg	supplier	wire	Aluminium (Al)	7429-90-5		0.153	mg	993506	111
				supplier	wire	Magnesium (Mg)	7439-95-4		0.001	mg	6494	1
				supplier	Ribbon	Aluminium (Al)	7429-90-5		9.295	mg	1000000	6736
Bonding wires	M-011 Other inorganic materials	0.154	mg	supplier	mold compound	Silica, vitreous	60676-86-0		401.369	mg	805999	290847
				supplier	mold compound	Epoxy Cresol Novolak	29690-82-2		34.858	mg	69999	25259
Bonding Ribbons	M-009 Other non-ferrous metals and	9.295	mg	supplier	mold compound	Phenol resin	9003-35-4		19.919	mg	40000	14434
				supplier	mold compound	Biphenyl epoxy resin	85954-11-6		29.879	mg	60001	21651
Encapsulation	M-011 Other inorganic materials	497.977	mg	supplier	mold compound	Antimony Trioxide	1309-64-4		5.976	mg	12001	4330
				supplier	mold compound	Brominated Epoxy Resin	40039-93-8		3.486	mg	7000	2526
				supplier	mold compound	Carbon black	1333-86-4		2.490	mg	5000	1804
				supplier	solder alloy	Tin (Sn)	7440-31-5		3.734	mg	1000000	2706
				supplier	solder alloy	Tin (Sn)	7440-31-5		3.734	mg	1000000	2706
Connections coating	Solder	3.734	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		3.734	mg	1000000	2706