




## Materials Declaration Form

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

Supplier Information			
<b>Company Name *</b>	STMicroelectronics	<b>Response Date *</b>	2019-02-15
<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 Giapello	<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>	<p style="text-align: center;">true</p> <p style="text-align: center;"><b>Legal Declaration *</b></p> <p style="text-align: center;">Standard</p>
<b>Legal Statement</b>	<p>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.</p>

Product				
Mfr Item Number	Mfr Item Name	Version	Mfr Site	Date
STH80N10LF7-2AG	R1(9*OL0EQ82	A	3068	2019-02-15
	Amount	UoM	Unit type	ST ECOPACK Grade
	1380.00	mg	Each	ECOPACK1
	Comment	ECOPACK® or ECOPACK® 1 is STMicroelectronics trade name for ROHS compliant devices		

Manufacturing information				
J-STD-020 MSL Rating	Classification Temp	Nbr of Reflow Cycles		 life.augmented
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-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 23rd November 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	0.27	Die - Leadframe	193
Lead	4.74	Soft solder	3432
Cobalt	2.37	Leadframe	1720
Antimony trioxide	6.12	Mold compound	4435

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	4.74	Soft solder	3432
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	4.74	Soft solder	955031

Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	R1(9*OLOEQ82					
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	3.950	mg	supplier	die	Silicon (Si)	7440-21-3		3.728	mg	943797	2701
				supplier	metallization	Aluminium (Al)	7429-90-5		0.086	mg	21772	62
				supplier	metallization	Nickel (Ni)	7440-02-0		0.021	mg	5316	15
				supplier	metallization	Silver (Ag)	7440-22-4		0.013	mg	3291	9
				supplier	metallization	Titanium (Ti)	7440-32-6		0.010	mg	2532	7
				supplier	metallization	Tungsten (W)	7440-33-7		0.022	mg	5570	16
				supplier	Passivation	Silicon Oxide	7631-86-9		0.021	mg	5316	15
				supplier	back side metallization	Titanium (Ti)	7440-32-6		0.003	mg	761	2
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.031	mg	7848	22
				supplier	back side metallization	Vanadium (V)	7440-62-2		0.002	mg	506	1
				supplier	back side metallization	Silver (Ag)	7440-22-4		0.013	mg	3291	9
				supplier	alloy	Copper (Cu)	7440-50-8		843.709	mg	994928	611383
				supplier	alloy	CopperPhosphorous (CuP)	12517-41-8		1.696	mg	2000	1229
Leadframe	M-004 Copper and its alloys	848.010	mg	supplier	alloy	Cobalt (Co)	7440-48-4		2.374	mg	2799	1720
				supplier	metallization	Nickel (Ni)	7440-02-0		0.214	mg	253	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	4.736	mg	955031	3432
				supplier	solder	Silver (Ag)	7440-22-4		0.124	mg	25005	90
Soft solder	Solder	4.959	mg	supplier	solder	Tin (Sn)	7440-31-5		0.099	mg	19964	72
				supplier	wire	Aluminium (Al)	7429-90-5		0.286	mg	996516	209
				supplier	wire	Magnesium (Mg)	7439-95-4		0.001	mg	3484	1
Bonding wires	M-011 Other inorganic materials	0.287	mg	supplier	Ribbon	Aluminium (Al)	7429-90-5		9.295	mg	1000000	6736
				supplier	mold compound	Silica, vitreous	60676-86-0		410.870	mg	805999	297732
Bonding Ribbons	M-009 Other non-ferrous metals and	9.295	mg	supplier	mold compound	Epoxy Cresol Novolak	29690-82-2		35.684	mg	70001	25858
				supplier	mold compound	Phenol resin	9003-35-4		20.391	mg	40001	14776
				supplier	mold compound	Biphenyl epoxy resin	85954-11-6		30.586	mg	60000	22164
				supplier	mold compound	Antimony Trioxide	1309-64-4		6.117	mg	12000	4433
				supplier	mold compound	Brominated Epoxy Resin	40039-93-8		3.568	mg	6999	2586
				supplier	mold compound	Carbon black	1333-86-4		2.549	mg	5000	1847
Encapsulation	M-011 Other inorganic materials	509.765	mg	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