



## 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

<b>Supplier Information</b>			
<b>Company Name *</b>	STMicroelectronics	<b>Response Date *</b>	2017-10-13
<b>Contact Name *</b>	Refer to Supplier Comment section		Refer to Supplier Comment section
<b>Authorized Representative *</b>	Floriana SAN BIAGIO	<b>Representative Title</b>	AMG 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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<b>Legal Statement</b>			
<b>Supplier Acceptance *</b>	true	<b>Legal Declaration *</b>	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
	MZ80*LT3CFC1	A	SH1A	2017-10-13
Amount	UoM	Unit type	ST ECOPACK Grade	
1900.00	mg	Each	ECOPACK® 1	
	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
NAC	NAC	NAC		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
NAC	Tin (Sn), matte, annealed	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
SIP	10.2x9.1x4.5	3	Through-hole	
Comment	Package: 80 TO 220 CU Wire on CU; MDF valid for L78M05CV-DG			

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 : REACH-7th July 2017				
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

Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	MZ80*LT3CF1					
Homogeneous Material	Material Group	Mass	UoM	Level	Substance Category	Substance	CAS	Exempt	Mass	UoM	Concentration in homogeneous material (ppm)	Concentration in product (ppm)
Die	Other inorganic materials	1.265	mg	supplier	die	Silicon (Si)	7440-21-3		1.230	mg	972332	647
				supplier	metallization	Aluminium (Al)	7429-90-5		0.008	mg	6324	4
				supplier	Passivation	Silicon Nitride	12033-89-5		0.007	mg	5534	4
				supplier	Passivation	Silicon Oxide	7631-86-9		0.007	mg	5534	4
				supplier	back side metallization	Chromium (Cr)	7440-47-3		0.001	mg	791	1
				supplier	back side metallization	Gold (Au)	7440-57-5		0.003	mg	2372	2
Leadframe	Copper & its alloys	1236.077	mg	supplier	back side metallization	Nickel (Ni)	7440-02-0		0.009	mg	7115	5
				supplier	alloy	Copper (Cu)	7440-50-8		1234.470	mg	998700	649721
				supplier	alloy	Iron (Fe)	7439-89-6		0.618	mg	500	325
Soft solder	Solder	1.076	mg	supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.989	mg	800	521
				JIG - R	solder	Lead (Pb)	7439-92-1	7a-Lead in high mel	1.027	mg	954461	541
				supplier	solder	Silver (Ag)	7440-22-4		0.027	mg	25093	14
				supplier	solder	Tin (Sn)	7440-31-5		0.022	mg	20446	12
Bonding wires	Other inorganic materials	0.268	mg	supplier	wire	Copper (Cu)	7440-50-8		0.268	mg	1000000	141
Encapsulation	Other Organic Materials	655.159	mg	supplier	mold compound	Silica vitreous	60676-86-0		511.024	mg	780000	268960
				supplier	mold compound	Bisphenol F type epoxy resin	9003-36-5		62.240	mg	95000	32758
				supplier	mold compound	Phenol resin	9003-35-4		55.033	mg	83999	28965
				supplier	mold compound	Antimony Trioxide	1309-64-4		11.138	mg	17000	5862
				supplier	mold compound	Brominated flame retardant	Proprietary		9.827	mg	14999	5172
				supplier	mold compound	Silica Cristobalite	14464-46-1		3.276	mg	5000	1724
Finishing	Solder	6.155	mg	supplier	mold compound	Carbon Black	1333-86-4		2.621	mg	4001	1379
				supplier	connection coating	Tin (Sn)	7440-31-5		6.155	mg	1000000	3239