



## 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 <i>* : Required Field</i>

Supplier Information			
<b>Company Name *</b>	STMicroelectronics	<b>Response Date *</b>	2018-01-09
<b>Company Unique ID</b>	NL 008751171B01		
<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>	Floriana SAN BIAGIO	<b>Representative Title</b>	AMS 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>	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
	HZGR*LW33FC1	A	SH1A	2018-01-09
Amount	UoM	Unit type	ST ECOPACK Grade	
331.3	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
1	260	3		
bulk Solder Termination	Terminal Plating	Terminal Base Alloy	Comment	
Not Applicable	Tin (Sn), matte, annealed	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
SIP	6.085x6.61x2.3	3	gull wing	
Comment	Package: GR TO-252 DPAK Cu Wire; MDF valid for L4931CDT33-TR			

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

Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	HZGR*IW33FC1				6000000.0	999998.0
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	2.167	mg	supplier	die	Silicon (Si)	7440-21-3		2.098	mg	968159	6333
				supplier	metallization	Aluminium (Al)	7429-90-5		0.027	mg	12460	81
				supplier	Passivation	Silicon Nitride	12033-89-5		0.009	mg	4153	27
				supplier	Passivation	Silicon Oxide	7631-86-9		0.012	mg	5538	36
				supplier	back side metallization	Chromium (Cr)	7440-47-3		0.002	mg	923	6
				supplier	back side metallization	Gold (Au)	7440-57-5		0.004	mg	1846	12
Leadframe	M-004 Copper and its alloys	213.855	mg	supplier	back side metallization	Nickel (Ni)	7440-02-0		0.015	mg	6922	45
				supplier	alloy	Copper (Cu)	7440-50-8		213.577	mg	998700	644663
				supplier	alloy	Iron (Fe)	7439-89-6		0.098	mg	458	296
				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.180	mg	842	543
Soft solder	Solder	1.834	mg	JIG - R	solder	Lead (Pb)	7439-92-1	7a-Lead in high mel	1.751	mg	954744	5285
				supplier	solder	Silver (Ag)	7440-22-4		0.046	mg	25082	139
				supplier	solder	Tin (Sn)	7440-31-5		0.037	mg	20174	112
				supplier	wire	Copper (Cu)	7440-50-8		0.077	mg	1000000	232
Encapsulation	M-011 Other inorganic materials	112.322	mg	supplier	mold compound	Silica, vitreous	60676-86-0		98.281	mg	874993	296653
				supplier	mold compound	Tetramethyl-biphenyl-diy-bis oxymethylene-bi	85954-11-6		4.493	mg	40001	13562
				supplier	mold compound	Epoxy Resin	28690-82-2		3.370	mg	30003	10172
				supplier	mold compound	phenol resin	25068-38-6		5.616	mg	49999	16951
				supplier	mold compound	Carbon black	1333-86-4		0.562	mg	5003	1696
connections coating	Solder	1.045	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		1.045	mg	1000000	3154