



## 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>	2018-05-21
<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**

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**

<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
	290	A	SH1A	2018-05-21
	Amount	UoM	Unit type	ST ECOPACK Grade
	290	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	2	gull wing	
Comment	GR TO-252 DPAK Cu Wire; MDF valid for LD1117DT50TR			

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 : 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
-	-			0
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
-	-	0.00		

Material Composition Declaration : note : Substance present with less 0.001mg will not be declared in this document						Mfr Item Name	290				6000000.0	1000002.0
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	2.451	mg	supplier	die	Silicon (Si)	7440-21-3		2.372	mg	967768	8179
				supplier	metallization	Aluminium (Al)	7429-90-5		0.030	mg	12240	103
				supplier	Passivation	Silicon Nitride	12033-89-5		0.010	mg	4080	34
				supplier	Passivation	Silicon Oxide	7631-86-9		0.014	mg	5712	48
				supplier	back side metallization	Chromium (Cr)	7440-47-3		0.002	mg	816	7
				supplier	back side metallization	Nickel (Ni)	7440-02-0		0.017	mg	6936	59
				supplier	back side metallization	Silver (Ag)	7440-22-4		0.006	mg	2448	21
Leadframe	M-004 Copper and its alloys	213.855	mg	supplier	alloy	Copper (Cu)	7440-50-8		213.577	mg	998700	736472
				supplier	alloy	Iron (Fe)	7439-89-6		0.098	mg	458	338
				supplier	alloy	Iron Phosphide (FeP)	26508-33-8		0.180	mg	842	621
Soft solder	Solder	2.082	mg	JIG - R	solder	Lead (Pb)	7439-92-1	7a-Lead in high me	1.988	mg	954851	6855
				supplier	solder	Silver (Ag)	7440-22-4		0.052	mg	24976	179
				supplier	solder	Tin (Sn)	7440-31-5		0.042	mg	20173	145
Bonding wires	M-011 Other inorganic materials	0.155	mg	supplier	wire	Copper (Cu)	7440-50-8		0.155	mg	1000000	534
Encapsulation	M-011 Other inorganic materials	70.413	mg	supplier	mold compound	Silica, vitreous	60676-86-0		61.611	mg	874995	212452
				supplier	mold compound	Tetramethyl-biphenyl-diyl-bis oxymethylene-b	85954-11-6		2.817	mg	40007	9714
				supplier	mold compound	Epoxy Resin	29690-82-2		2.112	mg	29994	7283
				supplier	mold compound	phenol resin	25068-38-6		3.521	mg	50005	12141
				supplier	mold compound	Carbon black	1333-86-4		0.352	mg	4999	1214
connections coating	Solder	1.045	mg	supplier	solder alloy	Tin (Sn)	7440-31-5		1.045	mg	1000000	3603