



## 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>	2017-02-20
<b>Contact Name *</b>	Refer to "Supplier Comment" section	<b>Contact Title</b>	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>	AMG MD CHAMPIONI
<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/online_tech_support.html">http://www.st.com/web/en/support/online_tech_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
	DZWY*56VA8RL	A	ZS1A	2017-02-20
Amount	UoM	Unit type	ST ECOPACK Grade	
16.37	mg	Each	ECOPACK® 3	

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 ; if coating is used o	Nickel/Palladium/Gold (Ni/Pd/Au)	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
DSO	2.9x1.6x1.05	5	gull wing	
Comment	Package: WY SOT 23 - 5; MDF valid for STM6823RWY6F			

QueryList : RoHS Directive 2011/65/EU-July 2011 – Annex II amended by Directive 2015/863-April 2015	
Query	Response
Product(s) meets EU RoHS requirement without any exemptions	true
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
Product(s) meets EU RoHS requirements by application of the selected exemption(s)	false
Product(s) does not meet EU RoHS requirements and is not under exemptions	false
Exemption Id.	Description

QueryList :REACH-12 January 2017				
Query				Response
The product 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						Mfr Item Name	DZWY*56VA8RL		16.37			
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	0.552	mg	supplier	die	Silicon (Si)	7440-21-3		0.541	mg	980072	33048
Die				supplier	metallization	Aluminium (Al)	7429-90-5		0.002	mg	3623	122
Die				supplier	metallization	Titanium (Ti)	7440-32-6		0.001	mg	1812	61
Die				supplier	passivation	Silicon Nitride (SiN)	12033-89-5		0.002	mg	3623	122
Die				supplier	passivation	Silicon Oxide (SiO2)	7631-86-9		0.006	mg	10870	367
Leadframe	Copper & its alloys	7.761	mg	supplier	alloy	Copper (Cu)	7440-50-8		7.522	mg	969205	459499
Leadframe				supplier	alloy	Iron (Fe)	7439-89-6		0.177	mg	23011	10812
Leadframe				supplier	alloy	Phosphorus (P)	12185-10-3		0.002	mg	260	122
Leadframe				supplier	alloy	Zinc (Zn)	7440-66-6		0.009	mg	1170	550
Leadframe	Nickel (Ni)			supplier	metallization	Nickel (Ni)	7440-02-0		0.047	mg	6110	2871
Leadframe	Precious metals			supplier	metallization	Palladium (Pd)	7440-05-3		0.003	mg	390	183
Leadframe	Precious metals			supplier	metallization	Gold (Au)	7440-57-5		0.001	mg	12821	61
Die Attach	Other Organic Materials	0.081	mg	supplier	glue	Epoxye Bisphenol A Resin	25068-38-6		0.023	mg	294872	1405
Die Attach				supplier	glue	Aromatic amine	Proprietary		0.003	mg	38462	183
Die Attach				supplier	glue	Glycol ether ester	Proprietary		0.003	mg	38462	183
Die Attach				supplier	glue	silica	60676-86-0		0.025	mg	320513	1527
Die Attach				supplier	glue	Aluminium oxide	1344-28-1		0.027	mg	203008	1649
Bonding wire	Other inorganic materials	0.095	mg	supplier	wire	Gold (Au)	7440-57-5		0.095	mg	981250	11214
encapsulation	Other Organic Materials	7.883	mg	supplier	mold compound	Silica, vitreous	60676-86-0		6.723	mg	853044	416286
encapsulation				supplier	mold compound	phenolic resin	29690-38-6		0.276	mg	34982	17071
encapsulation				supplier	mold compound	epoxy resin	25068-82-2		0.315	mg	39959	19500
encapsulation				supplier	mold compound	Biphenyl epoxy resin	85954-11-6		0.159	mg	20053	9786
encapsulation				supplier	mold compound	carbon black	1333-86-4		0.016	mg	2049	1000
encapsulation				supplier	mold compound	Zinc hydroxide	20427-58-1		0.079	mg	9953	4857
encapsulation				supplier	mold compound	Magnesium hydroxide	1309-42-8		0.315	mg	39959	19500