



## 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>	2017-12-20
<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>	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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**Legal Statement**

<b>Supplier Acceptance *</b>	true	<b>Legal Declaration *</b>	Standard
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**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
	HYW8*0881ABJ	A	ZS1A	2017-12-20
Amount	UoM	Unit type	ST ECOPACK Grade	
6	mg	Each	ECOPACK® 3	
	Comment	ECOPACK® 3 is STMicroelectronics trade name for ROHS compliant device without use of any ROHS exemption and without Halogen nor Antimony		

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	Nickel/Palladium/Gold (Ni/Pd/Au)	Copper Alloy		

Package Designator	Size	Nbr of instances	Shape	
SOT	2x1.26x0.93	5	gull wing	
Comment	Package: W8 SOT 323 5LDS; MDF valid for TS881ICT			

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	TRUE
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)	FALSE
4 - Product(s) does not meet EU RoHS requirements and is not under exemptions	FALSE
Exemption Id.	Description

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	HYW8*0881ABJ				5000000.0	1000001.0
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	0.178	mg	supplier	die	Silicon (Si)	7440-21-3		0.168	mg	943820	28000
				supplier	metallization	Aluminium (Al)	7429-90-5		0.002	mg	11236	333
				supplier	Passivation	Silicon Nitride	12033-89-5		0.001	mg	5618	167
				supplier	Passivation	Silicon Oxide	7631-86-9		0.004	mg	22472	667
				supplier	polymer die coating	PIX1 Gamma-butyrolactone	96-48-0		0.003	mg	16854	500
Leadframe	M-004 Copper and its alloys	2.954	mg	supplier	alloy	Iron (Fe)	7439-89-6		0.067	mg	22681	11167
				supplier	alloy	Copper (Cu)	7440-50-8		2.829	mg	957684	471500
				supplier	alloy	Phosphorus (P)	12185-10-3		0.001	mg	339	167
				supplier	alloy	Zinc (Zn)	7440-66-6		0.004	mg	1354	667
				supplier	metallization	Nickel (Ni)	7440-02-0		0.034	mg	11510	5667
	M-006 Nickel and its alloys			supplier	metallization	Palladium (Pd)	7440-05-3		0.003	mg	1016	500
	M-008 Precious metals			supplier	metallization	Silver (Ag)	7440-22-4		0.016	mg	5416	2667
Die attach		0.005	mg	supplier	glue	Carbocyclic Acrylates	proprietary		0.002	mg	400000	333
				supplier	glue	Bismaleimide resin	35325-39-4		0.002	mg	400000	333
				supplier	glue	2-preponic acid, 2-methyl	68586-19-6		0.001	mg	200000	167
Bonding wires	M-008 Precious metals	0.033	mg	supplier	wire	Gold (Au)	7440-57-5		0.033	mg	1000000	5500
Encapsulation	M-015 Other organic materials	2.830	mg	supplier	molding comppond	Epoxy Resin-1	29690-82-2		0.056	mg	19788	9333
				supplier	molding comppond	Epoxy Resin-2	Proprietary		0.056	mg	19788	9333
				supplier	molding comppond	Epoxy Resin-3	Proprietary		0.056	mg	19788	9333
				supplier	molding comppond	Phenol resin	25068-38-6		0.114	mg	40283	19000
				supplier	molding comppond	Silica	60676-86-0		2.542	mg	898233	423667
				supplier	molding comppond	Carbon black	1333-86-4		0.006	mg	2120	1000